An Address
ON
ELEMENTAL PATHOLOGY,

Delivered in the Pathological Section of the British Medical Association,

BY SIR JAMES PAGET,
PRESIDENT OF THE SECTION.

(Concluded from p. 607.)

THE resemblances which, in human pathology, we trace between the processes of repair and some of those of Inflammation are well-marked in plants. Of course, in speaking of inflammation in plants, we must be nearly limited to the essential parts of the process. In ourselves, we look to its so-called signs—in heat, redness, pain, swelling, and disturbed function; but these are not of the essence of inflammation, and, even in ourselves, one or more of them may be absent when yet the real process of inflammation is active. For the elemental pathology of inflammation, as for that of decay and of repair of injuries, we must study the altered relations between the elemental formed parts and the varying formless materials about them; and these, let me repeat, may be seen more nearly in plants than in animals, in which it is hardly possible to isolate any parts from the influence of stagnant or wandering corpuscles or of circulating blood and nervous systems.

The signs of inflammation, I have implied, cannot well be observed in plants. Increased heat in the part has not, I think, been noticed; yet I suspect that, with so rapid organisation as sometimes ensues in gall-formations, it might be detected. Redness is often present, as in the galls and curled leaves of which I shall speak presently; but it is in a fallacious likeness to the redness of congestion of blood; it is only the colour of imperfection which one sees in many immature and many decaying leaves. Pain we cannot suppose in plants; and yet it may be through some change like to that of transmission of nerve-force that we must explain what I find told by Frank,[1] that in many green parts of plants there appears, some few minutes after wounding them, a change in the normal position of the chlorophyll-grains and the protoplasm in cells at a distance from the wound—a change which, as he says, must be regarded as due to the transmission of a stimulus of some not well-known kind from the wounded to the intact living cells. Slight slowly-ensuing swelling is often evident in the inflamed parts of plants, and is due, as in animals, to new formation and to increased afflux of nutritive matter—an afflux, be it observed, not due to any vaso-motor nerve-change. Disturbed function is evident enough.

But the likenesses between the inflammations in plants and in animals are best shown in their visible structural changes; and these have been admirably traced by Waldenburg.[2] He has applied various irritants to leaves, fruits, and stems—such as foreign bodies, setons, crushings, cauteries, and others. The results, speaking very generally, are: that, as in ordinary wounds, the cell-structures actually involved in the injury perish and dry up; that those most nearly adjacent suffer degeneration, indicated by their protoplasmic contents becoming turbid and their chlorophyll becoming yellow or brownish; while in those next to them, and within distances varying according to the injury and the texture of the part injured, enlargement of cells ensues, and increase by division and thickening of the cell-walls.

In these changes you may study, with comparatively easy experiments, imitations (as near as difference of texture will allow) of the most constant constituents of inflammation in animals, especially those of the least acute of the productive interstitial inflammations, leading to thickening, opacity, induration, and other such changes. The defective maintenance of some of the natural structures of the part is evident; so is an increased afflux of nutritive material; so is an increased production of lowly organised structures not widely different from the natural structures.

[1] Encyklopædie der Naturwissenschaften, Abth. I., Lief 12, p. 238, from a paper by him in Pringsheim's Jahrb. f. Wiss., Bot. viii. p. 220.
[2] Virchow's Archiv, Band 27, 1863, p. 145.

But of all morbid processes in plants, none, I think, are so suggestive as are those produced by parasites, whether vegetable or animal. The whole subject would be far too large to speak of, even if I were familiar with it; it is, indeed, a subject of the gravest national importance; but, keeping to the design with which I started, and which was only that of pointing-out where useful pathological knowledge may be gained, I will speak of only some of the changes which are produced by insects. The most remarkable of these are the Galls;[3] and among the many hundreds of them that have been described I may assume that you know some in their natural mode of growth—such as the common oak-apple, with which some celebrate the restoration of our monarchy, and the bedeguar of the wild rose, the bright-crimson oak-spangle, the currant-gall, or the artichoke-gall, or the gall of pharmacy. But, besides the hundreds of different true galls, there are still more hundreds of changes of structure in leaves and stems and roots, all produced by the irritant secretions of insects, and all such as may justly be ascribed to processes of inflammation. In some, as in the "curl" of the leaves of the whitethorn, you find thickenings of leaves which are lifted, rolled, or curled into chambers which serve for defence of the aphides or other insects; in some, the thickened and distorted clusters of leaves, in buds or twigs, roll-up and are mutually fastened so as to form the walls of similar defensive lodgings; in some cases, leaves become swollen as with a kind of œdema; in some, their layers separate as if with blistering; or leaves, or stems, or fruits, or clusters of flowers, buds, or roots produce variously shaped and variously constructed growths of cellular parenchymatous tissue and cork, and, more sparingly, of woody tissue or of cells, whose thick walls become as hard as wood. Besides, some of the monstrous growths of parts of plants, and some of the viviparous variations, and the undue metamorphoses of leaves, are to be referred to the influence of parasites.[4]

It may seem bold to speak of so many hundreds of widely various morbid processes as having any essential character in common, or as fit to be included under one name; yet, I think, we may regard the whole of these as being such as, in our pathology, we should call inflammatory hypertrophies or hyperplasiæ. They all show a rapid increase of lowly organised structures, by derivation from, and in continuity with, those pre-existing. There is, as in the products of our inflammations, a general likeness among these new structures whatever be the part of the plant from which they are derived, and all bear a general likeness to the structures formed after injuries of actively growing parts. In the morbid growths formed by these new structures, the deflection from the natural shape and construction of the part, in continuity with which they have grown, is often not complete; they often retain marks of characteristic normal forms, and sometimes acquire marks of natural variation from the species.[5] Moreover, all these morbid growths have their origin in what may justly be called "irritation" of the part on which they grow; and in all of them, I think, we may note signs of degeneracy from natural conditions, either in the absence of stomata or similar structures, or in the presence of the red, or yellow, or other colours commonly noticed in decay.

Here, I believe, are reasons enough for regarding all these galls and gall-like products of disease, generated in plants by insects, as analogous with a large group of the products of inflammation which we study in our own

[3] Many growths like galls are produced by fungi and other parasitic plants; but those I omit. Many are described by Schroeter (Beitrage zur Biologie der Pflanzen, Band I., p. 4) and by Beijerinck. The best essays on the minute structures and modes of growth of galls are those of Lacaze-Duthiers in the Ann. des Sciences Naturelles, Botanique, 1853; of Prillieux, in the same; Botanique, 1876; and of Beijerinck, Bijdrage tot de Morphologie der Plantegallen (Utrecht, 1877). But I am most indebted to Miss E. A. Ormerod, who, by her admirable works on Entomology and Meteorology, sustains the scientific reputation of the name so well known to pathologists. Since the Address was sent to press I have received the second part of Frank's essay in the Encyklopædie der Naturwissenschaften, containing a much fuller account of galls and gall-like growths than, I think, had before been published. With this, or with the soon-coming second part of his separate Pflanzen-pathologie, and with Beijerinck's essay, the whole subject may well be studied by any human pathologist. But I hope that it will soon be yet more clearly illustrated by Dr. Arthur Ransome.
[4] Among them are the "witch-brooms" of the birch, pine, larch, &c. Miss Ormerod has described the "Phytoptus of the Birch-knots" in the Entomologist, 1877. A long list of the teratological forms due to parasites is in Beijerinck, loc. cit., p. 32. With this should be studied Dr. M. Masters's volume on Vegetable Teratology.
[5] As Darwin pointed out in the likeness of the mossy covering of the common wild-rose-gall to the calyx of the moss-rose. There are, also, instances in which galls imitate small cones or other structures of the plant.

pathology; and the analogy is not the less because neither group can be circumscribed with any exact definition.

I will not be tempted to speak long, but I beg you to think long, of the marvellous facts of natural adjustment which we have here, in this intense example of the "*sic vos, non vobis.*" Here are the bare facts. Each species of these parasitic insects can compel some part of a plant into such disease as shall supply good food, or well-built and well-placed lodging, or both, for itself or for its eggs and larvæ, or even for part of the life of its complete offspring. Each insect selects, by instinct, the very part of the plant which is adapted to its purpose. The provision made at the cost of the plant is exactly adapted in quality to the welfare of the insect or its offspring, and in quantity as well; for both the lodging and the food are made sufficient for any necessary time—for days or weeks, often for many months; in some instances, for two or even three years. Nay, more than this, the gall, of which the growth has been provoked by the virus of one insect, may be fit for the food and lodging of another, which, when all seems complete, can penetrate the gall-cavity, and there, as with theft or murder, obtain food and lodging perfectly suited to itself or its progeny.[6] And the whole process in the plant, though it be one of disease and, in a sense, unnatural, is yet so regular, so constant and specific, that the form and other characters of each gall or other morbid product are, usually, as constant and characteristic as are those of the insect itself, and the differences among the galls are at least as great as those among the insects. Is there, in all the range of natural history, a more marvellous group of facts than may here be studied? If you would like to work out a problem in evolution, find how it has come to be a part of the ordinary economy of nature that a gall-insect compels some part of a plant to grow in a manner which, while injurious to the plant, becomes useful to one insect not yet born, and to another who will, in due time, kill this one and feed on it.

But now, of the relation between galls and our specific diseases, such as our eruptive fevers, syphilis, cancer, gout, and others.

In these galls and other similar diseases in plants we have, it seems, hundreds of specific diseases due to as many hundreds of specific morbid poisons;[7] for the most reasonable, if not the only reasonable, theory of these diseases is, that each insect infects or inoculates the leaf or other structure of the chosen plant with a poison peculiar to itself. The poison may be merely deposited; but, in the instances best for study, it is inserted in the plant-structure, whether leaf or any other; and the wound for inserting it, the poisoned wound, may be made either with part of the oral apparatus, or, as in most of the true galls, with the ovi-positor through which one or more eggs are passed with the virus, and are left among actively living structures of the plant. The little wound closes; the virus, whether an oral or an ovarian secretion, remains, and the result of its influence on the plant-structures and their contained protoplasm is the formation of the gall or other morbid product. The whole process may be compared with the local consequences of the insertion of vaccine-lymph, or any such morbid poison, in ourselves or other animals. I say the local consequences, for we have no clear evidence of what might be called general infection or constitutional disease in the plants. In the absence of quickly moving fluid, such as lymph or blood, the virus infects only the part in or very near to which it is inserted. A single oak-leaf may have fifty "spangle" galls on its under surface, but the structures between them may be quite healthy; and when in any instance a general damage is done to a plant by gall-growths, it seems to be only as a remote consequence of the spoiling of considerable portions of its structures. And this appears to be true, even though the virus may continue active for a long time, as in the galls which begin to grow soon after the insertion of the virus with the ovum, and continue to increase during the whole—sometimes long—development of the larvæ; or even, in a few instances, after the larvæ have deserted them.

But, while plants supply no occasions for studying fever, or any other of the constitutional phenomena of specific diseases, they are all the more fit for illustrations of some of the local characteristics. Let me suggest some things for study in them, in addition to the inflammatory changes of structure.

We find hundreds of different forms of galls, and we may be nearly sure that there are as many kinds of morbid poisons produced by the gall-insects, each form answering to a different virus. This may suggest that we may be too grudging in thinking of the number of morbid poisons, or of their modifications in the blood, to which diseases in ourselves may, at least in part, be due.

It is true that the galls are produced by many species of insects on many species of plants; and that the differences among these species may be as wide as those between ourselves and any other mammalia. But, even among closely allied species, there are many and very different forms of galls. Mayr,[8] ten years ago, described and figured ninety-six kinds of galls found on the oaks of middle Europe, all but two of them being produced by different species of gall-wasps. Of those ninety-six kinds, thirty-two are formed on the leaves alone; and, even on similar parts of one oak-leaf, it is not rare to find three or four different forms of galls.[9]

We have, thus, clear evidence of a very large number of morbid poisons, each of which is capable of producing, in an appropriate subject, a distinct specific disease with a characteristic morbid structure.

We may safely believe that, for each of these morbid poisons, there is no test yet possible except that of the disease which it may produce; and so we may as safely believe that there may be many morbid poisons or morbid conditions of blood in ourselves which may be indicated by very different products of disease, though they may be beyond detection by any other, even the most refined, method of research.

Further, though it may be impossible by any other means to detect any differences among these morbid poisons, yet the diseases which they severally produce may be widely different; as unlike as are a pustule and a goitre, or a vaccine vesicle and a carbuncle, or as any of the morbid changes due to gout or rheumatism.

It may be observed, however, that these great differences are marked in outer shape and construction much more than in minute structure. As, in human pathology, there are certain general characters and degrees of likeness in all inflammatory products, however differently they may be constructed—in pustules, vesicles, thickenings, opacities, adhesions, scars, fibroid, and other changes; so, in galls, there are certain likenesses in minute structures, even among those that are, in their construction, size, and outer shape, most unlike.

It may be well to learn from this a lesson on the imperfection of our methods of minute research. As we cannot doubt that the differences in outer shape and method of construction of the products of specific diseases are associated with differences of chemical composition and ultimately minute structure, so it must be in those yet greater differences on which we frame our distinctions of species in all living nature. The coarse, visible, and tangible distinctions may be well marked; the really material differences with which these are associated, and to which, probably, they are due, are beyond our reach.

Again, in the study of specific diseases in ourselves, we see many variations due to the differences in the parts, or even in the persons affected with them. In the study of galls similar variations may be seen. As a general rule, each gall-insect lays its eggs in one part of one plant, as the leaf, leaf-stalk, bud, fruit, or root of this or that species; but if, as rarely happens, one lays in different parts of the same plant, there is usually a very close agreement in the characters of the resultant galls. A few exceptions to this rule are known, one of them being in the very different galls produced on the roots and on the leaves of vines by phylloxera vastatrix; but the rule is generally observed, and accords with the fact of certain features of general likeness being observed in the products of our several specific diseases, wherever they may be seated.

When the same insect lays in similar parts of different plants the galls may be all similar,[10] but I believe they more usually are different, and that their differences are such as bring them severally nearer to the distinctive characters of the plants on which they grow; just as, in ourselves, a

[6] The Inquilinæ, Einmiether, lodgers, or (as they might be called) burglars, are usually described in the works on gall-insects, though not themselves "gall-makers."

[7] Karsch (abstract in the Botanische Jahresbericht, 1879, p. 150) gives the total number of the forms of galls at present known as about 1250, of which one-fifth belong to the Cynipidæ.

[8] Die mitteleuropäischen Eichengallen, 1870.

[9] While writing, I have before me some oak-leaves from a sapling on which are five kinds of galls, three being, in several instances, on one leaf.

[10] Fr. Löw. Ueber Gallmucken. In Verh. der K. K. Zool.-botan. Gesellschaft in Wien, 1877.

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specific disease may be modified by the personal conditions of each patient.

In similar analogy the differences are yet greater when the eggs are laid in different parts of different plants.

Very rarely the same insect may produce on one leaf different forms of galls.[11]

In all these points you may, I think, find help in the study of specific diseases. I will add only one more. Usually the gall begins to grow directly after the deposit of the egg; but sometimes there is a long delay, a long period of suspense, an "Eiruhe,"[12] which may last for many months before the growth begins. What is going on during this time? I believe we may see here an instance of events very difficult to study in our own pathology, in which two or more conditions must concur to the production of some disease, and one of them must wait for the complete efficiency of the rest. In the case of these long-delayed galls, either the egg, after being laid, requires a long time for the completion of changes ending in the production of the necessary morbid poison, or the plant-structure in which it is laid requires the time for changes to make it susceptible of the poison; or both egg and plant may need to change. So in us, two or more conditions must concur. A tendency to gout may be inherited, and the blood may have slowly acquired the necessary morbid condition; but no structure may be susceptible of gouty disease till a blow, or a strain, or some disturbance of nervous force makes it so. So with cancer, a general tendency may be inherited, but it must wait till the material of some structure is by age, or injury, or long-continued "irritation," changed into fitness for concurrence in morbid action with the material on which the general tendency depends. Then, when the two materials meet in mutual fitness, the result may be a change so great, that we may compare it with that from an act of impregnation. I have often thought of this comparison when seeing the almost sudden appearance of cancer in a breast or a tongue or a scar long irritated. In the growth of these galls the comparison may seem less far-fetched; at least, it may be difficult to suggest any nearer comparison for a process in which the meeting of two living materials from different organisms is immediately followed by such a change in the method of life of one of them, as ends in the production of a definite new growth exactly adapted to the method and purpose of the life of the other.

But it is more than time that I should have done with galls. If I have been tedious, let me assure you that I am myself ashamed to have gathered so little from the rapidly increasing records concerning them to which the botanists, and still more the entomologists, of our time are contributing. And, even for that little, I feel as if I deserved to be compared with one of those burglars that I spoke of, feeding on the results of others' labours. Let it be my apology to them, that I believe I have taken nothing they would have used. I have only taken, from their rich stores of facts, some that may be much more useful in pathology than in natural history. And I am sure, from all I know of naturalists, that they will gladly let any of you into their fields, though you may use them for your own purposes much more than theirs. It would be difficult to find a field for the study of the very principles of pathology larger or richer than this offers to you. The objects are within easy reach; hundreds of morbid processes are at hand for deliberate study; experiments may be made at will; and, during many months, thousands of insects, as natural vivisectors, will be at work for you; and it must yet be some years before they will be required to take out licences.

I will speak of only one more of the subjects of general pathology—that of tumours; and on this I may be very brief.[13]

[11] Beijerinck, loc. cit., p. 21, from whom, also, the two preceding sentences are quoted. He cites from Winnertz the case of Cecidomyia tremula, which may produce on the same leaf of the white poplar four different forms of galls; but I would suspect that there may be as many differences among the eggs, just as there are among those of some Lepidoptera, in which, out of the same brood of eggs, all laid in the same place, some are hatched in the next following season, others in one, others in two, seasons later. Of course these eggs are not all alike, though no other difference besides that proved by the times of hatching may be discoverable in them, or in the insects produced from them.

[12] Schenck, Beiträge zur Kenntniss der Nassauischen Cynipiden, p. 24. He cites the case of Trigonaspis megaptera, which lays its eggs in May, and the galls do not appear till the next April; others lay in buds, and the galls appear at the time of opening of the leaves. Hartig mentions similar facts (Zeitschr. für die Entomologie, Band ii., p. 176, 1840).

[13] What is here said of morbid growths, and some of the deductions from the study of galls, were, for the want of time, omitted in delivering the address.

I do not know if there be any morbid growths in plants which may justly be compared with our cysts or cystic tumours. Foreign bodies lodged in them usually give rise to such changes in the immediately surrounding textures as produce layers of cork-tissue, which may be compared with the capsules of connective tissue similarly formed around foreign bodies in animal structures;[14] but I do not know if there be any such diseases as cysts filled and enlarging by the increase of secretions or growths from their own walls.

Growths which may be coarsely—and only coarsely—compared with our cheloids are common on elms and other trees, especially on apple-trees. They are called cankers, or in Germany by the same name as cancers—Krebs.[15] They are usually rounded and coarsely nodular masses of wood, covered with bark, sessile singly or in clusters on branches, and depressed at the middle of their projecting surfaces. Thus, in form, they are not far unlike masses of scirrhous cancer projecting from the breast or axillary glands; and the likeness is the nearer when, as is usual, the depression on their surface leads into a cavity bounded by decaying wood. The imitation of an ulcerating cancer may justify the use of the same name; but in the canker of the trees the central cavity usually indicates the beginning, not the advance, of the disease; for cankers, like most cheloids, are formed after wounds—whether from frost, or blow, or injury of parasite, or any other cause. Around these wounds layers and bosses of wood are annually heaped up, as if with an exaggeration of the process of repair, and with concentric growth they may close in and complete the likeness to the cheloid. But more commonly, while the outer part of the canker is annually increasing, its inner part is constantly decaying under the attacks of the parasites which the wound let in, and which plants seem to have no power to expel. Thus, within a kind of shell of laminated wood, outstanding like a tumour on the branch, you may find a great hollow space filled with rotten wood and other residues. It may look very like a mass of cancer, with central softening and decay; and the likeness is even greater when, as not rarely happens, the central decay keeps pace with the formation of new wood. Then is formed what some call an open cancer; others gangrene or Brand. In these an uneven surface of rotting and dead wood is surrounded by an undulating, knotted, and everted or overhanging border of the wood annually formed, but in its turn destined to decay, and thus to imitate the constantly enlarging cancerous ulcer with its nodular uplifted borders.

It is impossible not to be struck by these likenesses between cankers and cancers, and I commend them to your study, though I fear they are much more apparent than real. The nearer, yet still distant, likeness seems to be that to cheloid growths; for these also appear as morbid troubled processes for repair, and they are so far like to tumours that no line of definition between them seems yet clear.

The growths in plants which may, I think, be deemed most nearly like to our tumours, are those which are called exostoses,[16] knours, or wens. They may, indeed, be regarded as only prominent examples of that disorderly growth of adventitious buds which produce the various strange and beautiful knots and veins in ornamental woods; but they are too like tumours for me to pass them by. You may find plenty of them on the trunks of the beech, hornbeam, ash, birch, holly, and cedar. The best specimens appear as ovate or nearly spherical masses of hard wood partly covered with bark, which is reflected on them from the continuous bark of the trunk on which they rest. They range from a few lines to many inches in diameter, and are attached sometimes broadly, sometimes by short narrow pedicles continuous with the wood of the tree. Some are without pedicles, and lie as free encapsuled masses in the growing wood.

In many of these conditions there is a very strong resemblance between these growths and some of the bony exostoses after which they are named. Especially when one breaks them off the trunk of the beech, or the holly, or cedar, and sees their pedicle of attachment and the bark-like integument and periosteum, continued over them, one cannot but compare them with the narrow-based ivory exostoses of the skull or the pedicled exostoses which are common on the

[14] See Arloing in Ann. des Sc. Nat., 1874, t. iv. p. 27.

[15] Sorauer, Handb. der Pflanzenkrankheiten, 1874, p. 199, &c.; Göthe, Ueber den Krebs der Apfelbäume; Leipsig, 1877.

[16] Berkeley in Gardeners' Chronicle, 1855 and 1857; Trécul ..... des Loupes et des Broussins in Ann. des Sc. Nat., t. xx., 1853. An excellent account of the knots and veins of wood to which they are related is given by Fr. nk; loc. cit., Maserbildung, p. 394.

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femur and humerus, or with the sessile fibroid uterine tumours.

On section, they show themselves formed of very hard wood; and their pedicles appear as cylinders of wood passing from their centres into continuity with the normal wood of the trunk. Through these pedicles, while they last, the exostoses probably obtain some of their materials for growth; when detached, they wholly subsist and increase on materials derived from the cambium spread out over them. In this continued growth, when encapsuled, they resemble the typical tumours of our pathology more than do any other morbid growths on plants; and they may continue to grow so long as nutritive material is supplied to them.

Now, the history of these growths is very suggestive to us. They are derived from buds, which remain, as Trécul says, in a sort of lethargic state for several years, and then become active, and form either a little branch or a *loupe* or exostosis, which, in its increase, will project more and more beneath the bark. Surely, they may thus confirm that theory of tumours which regards those whose structure does not differ widely from the natural structures as growths derived from portions of germinal substance remaining, though one knows not why, for years "lethargic," and then becoming active, growing in their own method, and subsisting on materials derived from the living parts around them.[17]

Before I end, let me briefly say some things in apology and self-defence.

If I have seemed to speak as a botanist or any kind of naturalist, I have erred. It is more than forty years since I was a botanist, and anyone familiar with the science as it now is may justly say that I know nothing about it. He may detect at once my ignorance even of the language in which I have tried to tell where, in the field of botany, good facts for pathologists may be found.

I have not tried to deal with the whole subject of the diseases of plants. It is far wider than I could learn, even if the duty of my life were not to study those of men. I have not tried to learn more from them than may help to give me, and perhaps you, a clearer and wider view of human pathology and the duties it imposes upon us.

In dealing with even this narrow range of the diseases of plants, and in referring to the vastly greater number of those which occur in them—especially in the plants which we, to our own not their advantage, cultivate—I may seem to have been giving evidence against belief in the influence of nervous systems in the production and methods of organic diseases. I have had no such design against any reasonable belief of the kind; I have long held, and often declared, belief in the trophic influence of nerve-force. An alteration in the nervous force in a part can surely alter its method of nutrition, even without altering the condition of its blood-vessels, as much as an alteration of its temperature can; and, to cite no others, the facts which Brown-Séquard and Hutchinson brought before us yesterday, tested as they have been, are beyond refutation. Only, let us learn from a pathology more nearly elemental than that which we can study in ourselves, that many processes of disease, even the most various, may occur when there is no nervous system; and that there are many processes of degeneracy, and of repair, and of disease, of which the essential features are alike whether in the presence or in the absence of a nervous system. The study of such processes in plants, and even in crystals, may help us towards learning the real relation between the nervous force and the processes of organic disease. A certain normal condition of nervous force abiding in each part accessible to it may be deemed a necessary condition of the healthy life of that part; as a certain normal temperature is a necessary condition, and perhaps even a certain electric state. But we are bound to recognise the distinctions between the conditions of life and the essential properties of living things; and, as I proposed when beginning, so now, I hope I may have succeeded in showing that it will be very useful if you will study pathology in bodies less complex than our own, especially in such as are not subject to those conditions of our own elemental organic life, which are of all the most difficult to estimate—the conditions, namely, of a nervous system and a quickly circulating and quickly changing blood.

And now let me, only for a minute, claim the position of a senior in our profession, that I may tell how the study may be useful for something more than the direct advancement of knowledge.

I hold it to be very desirable that every one of us should, all his life long, study some science in a scientific manner. There seems to be no equally good method for maintaining the temper and the habits which, by making us always good students, will make us as good practitioners as we can be. There is no method so good for maintaining a constant habit of inquiry, with accuracy and perseverance in research, the power of weighing evidence, of calmly judging, and of accurately speaking; none better for cultivating the love of truth, the contempt for fallacies, whether others' or our own, the gentleness and courtesy which are appropriate to the consciousness of the imperfection of our knowledge.

You may say that we can study science in the practice of our profession. So we may: at least, some of those among us may, who, before getting into practice, spent many years in scientific pursuits, and acquired habits which it is very hard to lose; but, even for these, the study of science in their practice is too much like that which, I suppose, an astronomer may pursue in some stormy night on a railway journey. For really scientific study, we need repeated observations in unchanged conditions, the right to watch deliberately the course of natural events, sometimes to change that course when and how we please, to set down our descriptions of the objects of our study, even while we watch them, sometimes to have them at home and readily at hand for revision and refreshment of memory. These and many other conditions for scientific study cannot be had in our practice, in which our first and never-ceasing duty must be to do, as soon as we can, all the good we can, though in doing it we may lose or spoil all the best opportunities of acquiring fresh knowledge.

If, then, I am thus far right, that we all are always bound to study a science in a scientific manner, and that it is very hard to do this in our practice, let me again commend to you this elemental pathology. In any fragment of it, studied in those fragments of time which we are all too apt to waste, you may find ample opportunities for observation and experiment, for recording, collecting, and comparing facts, for generalising, for imagining and testing; thus you may gain the happiness and reputation of discovery; and, without ever leaving the paths of duty, you may refresh and strengthen your minds in the study of stores of beauty, wonder and utility, such as, in all ages, have attracted the wisest and the best of men.

[17] I think that many examples of "club" on the roots and stems of cabbage and other species and varieties of the same order may illustrate the growth of tumours. But some are certainly insect-galls, and the parasitic origin of others is suspected.

DIPHTHERIA AT ST. GEORGE'S HOSPITAL.

BY T. WHIPHAM, M.B.,
PHYSICIAN TO THE HOSPITAL.

CASE I. — Esther S. C——, aged six, was admitted under Dr. Barclay's care into St. George's Hospital on April 21st, 1880. The parents and relatives were healthy. The family originally consisted of ten, of whom five died of "coughs and teething" between the ages of one and two. One died soon after birth, and one died on the day previous to the admission of this child from "disease of the throat," with which it had been attacked on April 19th. The patient had "measles and bronchitis" a few months ago, otherwise had been healthy. On April 19th she was attacked with sore-throat and hard swelling below the angle of the jaw on each side, having been previously free from throat affection. The swelling rapidly increased, and was accompanied by difficulty of swallowing, cough, restlessness, loss of strength, and great thirst.

At the child's home there were at the time of her admission two other children apparently in good health. No similar throat affections had been heard of in the neighbourhood of their dwelling (King-street, Chelsea). There was, so far as the mother was aware, no defect in the drains, and the house was free from bad smells.

The patient was of strumous aspect, with fair hair and delicate skin, but well nourished. There was much swelling beneath the angles of the lower jaw; the swelling was of about the size of an egg, and hard; and from the nostrils

came a glairy discharge. There was neither cough nor dyspnœa. The tongue was clean, but the soft palate and pillars of the fauces were covered with a thick white membrane. Pulse 125, fairly strong, and regular. Temperature in the evening 100° F.; respiration 30. Deglutition difficult.

April 22nd.—Slept fairly well; no delirium; took fluid nourishment without much difficulty; some, however, returned through the nose; bowels confined; pulse 160, weak, regular; temperature 99° in the morning; no urine passed. The patient died at 9 P.M. from sudden failure of strength; there was no obvious dyspnœa before death.

The treatment consisted of ten minims of tincture of the perchloride of iron, and two minims of dilute nitro-hydrochloric acid in two drachms of water every two hours; ten ounces of port wine daily, strong beef-tea and milk, of each two pints.

At the post-mortem examination no membrane was found, but the mucous membrane of the fauces, larynx, and trachea was intensely congested, and covered with a little thin, purulent secretion. The heart was contracted, and to all appearance natural.

CASE 2.—Alice C——, aged twelve, sister to the above, was admitted under Dr. Barclay, on April 21st, 1880. She had always been healthy, and at the time of her admission was well nourished. She had had measles a few months ago, but had not been subject to throat affections. This child was suddenly taken ill about midday on April 21st, and she complained of pain under the lower jaw, and of difficulty in swallowing.

When admitted she was very prostrate; the neck was much swollen; there was swelling below the angles of the lower jaw, and the child spoke with difficulty. She was admitted in the evening, a few hours after her sister. She resembled her sister in appearance—i.e., she had light hair and fair complexion, and was well nourished. There was slight dyspnœa, but no cough or expectoration. There was much difficulty in opening the mouth; a whitish membrane was visible on the soft palate and tonsils. Temperature in the evening 103°.

April 22nd.—Passed a restless night, with some delirium, but took wine, milk, and egg-and-brandy mixture; respiration was somewhat noisy; no action of the bowels; pulse 140, weak but regular. Temperature: morning, 104°; evening, 103°; urine highly albuminous.

23rd.—Almost pulseless; restless and delirious at night. Took but little nourishment. Died of asthenia in the evening.

Treatment:—Twelve ounces of port wine, four ounces of brandy mixture, with two pints of strong beef-tea and milk.

No post-mortem examination was made.

CASE 3.—Annie B——, aged twenty, general servant, was admitted under my own care on April 19th, 1880, in an extreme state of depression, suffering from pneumonia of the back of the left lung. It appeared from the history that the patient was in her usual health on April 13th. On the morning of the 14th she was unable to get up, and when her parents saw her on the 17th she was delirious. The delirium continued, being worse at night, and on the 18th she became so violent that two persons were required to keep her in bed. There had been diarrhœa for a day or two before her admission. She had been comparatively free from cough. She was ordered two pints of strong beef-tea and milk, five ounces of port wine and an egg.

April 20th.—She was delirious at night; one loose motion had been passed in the bed; no urine had been passed, the bladder was therefore emptied with the catheter, and the urine was found to be clear, acid, sp. gr. 1015, albuminous.

At the time of my visit her face was dusky; she was much depressed, delirious, but when roused answered questions rationally. She was constantly picking at the bed-clothes. Her skin was hot and dry; her tongue moist (probably from fluid nourishment, which she took readily). Pulse running and weak; respiration quick and shallow.

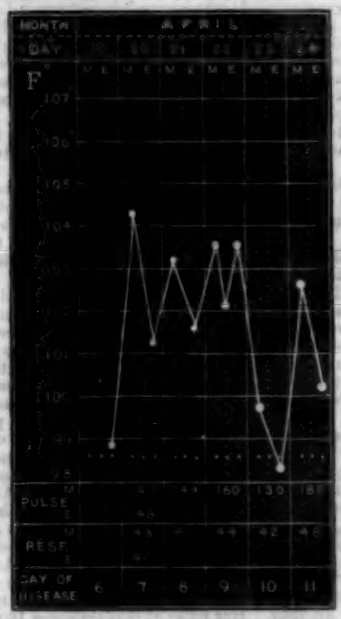
A hurried examination, which was all that could be attempted under the circumstances, revealed pneumonia of the lower lobe of the left lung posteriorly. The abdomen was flaccid and free from spots. She was ordered quinine and nitro-hydrochloric acid, and in the evening four ounces of brandy. A poultice was applied to the chest.

21st.—Owing to the indefatigable exertions of the head nurse, the patient was wonderfully improved in every respect, and was partially sensible. About noon one of the children, Esther S. C——, was brought into the ward, and placed in a bed nearly opposite to her, and remained there for two hours and a half, when she was removed to the separation ward.

22nd.—The patient passed a very restless night; slept about twenty minutes only, and was very delirious. The urine and fæces were passed unconsciously in the bed. Respiration 42, chiefly abdominal, with marked movements of the alæ nasi. Tongue thickly coated, dry and brown. She took both brandy and nourishment well.

23rd.—Passed a better night, but otherwise showed no improvement. She occasionally complained during the day of sore-throat. This was attributed to the fact that the brandy had been administered with as little water as possible, in order to save her the fatigue consequent upon the exertion of swallowing. She took nourishment and stimulants readily.

24th.—Passed a restless night, with low muttering delirium; still she continued to take food, almost with avidity. At 9 A.M. she spat up a tenacious white membrane, which had the appearance of having been moulded to the form of the soft palate and fauces. On examining the mouth at 1 P.M. I found the soft palate and tonsils and pillars of the fauces covered with an opaque, white diphtheritic membrane. A spray, consisting of lactic acid, five minims to an ounce of water, was ordered to be applied to the throat frequently, and the parts covered by the membrane were brushed freely with a solution of benzoate of soda (two drachms to six ounces). The brandy was increased to eight ounces. During the early part of the night the delirium was somewhat less, but there was more difficulty in swallowing. She died exhausted at 4.30 A.M. on April 25th.



The body was examined fifty-eight hours after death. Decomposition was already very far advanced, and was far more evident than in the case of another body in which life had been extinct twenty-four hours and three-quarters longer. Externally the neck was swollen, the skin much discoloured, the superficial veins clearly marked, and the subcutaneous tissues infiltrated with blood-stained serum. The thyroid gland was much enlarged. The mucous membrane of the fauces, larynx, trachea, and larger bronchi was intensely congested, but no distinct membrane was found: the mucous surface of these parts being merely studded with minute yellow points, apparently the remains of the diphtheritic membrane. The back of each lung was greatly congested, and the tissue of the left soft, and easily broken down by pressure: portions of the left lung, on being thrown into water, sank at first, and then slowly rose to the surface. The organs of the body generally were much decomposed and blood-stained; the heart, though contracted, was flabby;

the blood fluid. The liver was soft, and especially greasy in appearance.

CASE 4.—Probationer S——, aged thirty-three, had been on duty for some weeks in the male accident ward, and on the evening of April 21st was told off to take charge of the two children, Esther and Alice C——, in the separation ward, having been up to that time in her usual good health.

On April 23rd, at 5.50 P.M., the second of the children died, and in the course of the evening Probationer S—— complained of sore-throat.

Next day at 1.0 P.M. I saw her: she was looking pale and anxious, with a weak pulse of 110. She complained of feeling very ill. Her right tonsil was much swollen and very red: on its inner surface was a ragged-looking yellow patch of about the size of a threepenny-piece. The patch resembled the sloughy condition of mucous membrane such as is commonly observed in cases of "hospital sore-throat." She was ordered a mixture containing tincture of perchloride of iron twenty minims, chlorate of potash one scruple, dilute hydrochloric acid twenty minims, sulphate of quinine two grains, spirit of chloroform half a drachm, water one ounce, every four hours, with eight ounces of port wine. She was also directed to take as much strong beef-tea and milk as possible, and to spray the throat frequently with a solution of lactic acid (five minims to one ounce.)

On Sunday, April 25th, Mr. E. V. Dickinson, who was officiating as house-physician, sent me a notice that the patient was much worse. At 8.15 P.M. I saw her, and by the indifferent light of a candle I found the soft palate and tonsils much swollen; the parts being, as far as could be seen, œdematous. It was impossible to be certain as to the presence of a membrane. There was great swelling of the neck, and especially of the parts below the angles of the lower jaw. The lactic acid spray was continued, and the throat was ordered to be swabbed out with solution of benzoate of soda (two drachms to six ounces) at frequent intervals, and spongio-piline saturated with warm Goulard and laudanum applied to the neck. The wine was increased to sixteen ounces, and eight ounces of egg and brandy mixture prescribed.

At midday, April 26th, I learnt that she had taken both food and stimulant readily; had passed a sleepless night, having suffered much pain in the throat, but had had no delirium. The neck was very much swollen, and the fauces and tonsils were covered by a dense white membrane.

The same night, between midnight and 1 A.M., I saw her again, when some slight improvement appeared to have taken place. The pulse was 120, and was a trifle stronger. She still continued to take all that was given her, but the pain in swallowing was very distressing. She was free from cough, but constantly hawked in order to remove the mucus from the throat. As far as could be seen by the candlelight the membrane had cleared off the pillars of the fauces. The inability to open the mouth wide, however, prevented accurate examination. The tongue was sore, swollen, and coated with a thick, dirty-white fur. The bowels acted freely. She was perfectly conscious, and still continued to take the wine, brandy mixture, and fluid nourishment. At 4.30 A.M. she became much worse. Mr. H. Griffiths, the house-physician, saw her, sprayed the throat with lactic acid, and applied the benzoate of soda freely. Both afforded relief in that they alleviated the dryness of the throat and the pain on swallowing. About 5 A.M. Mr. Griffiths again saw her, as she was evidently sinking, and again sprayed the throat for nearly an hour. Her pulse at this time was 160, and extremely weak. She took wine and nourishment in less quantity, owing to the painful deglutition. At 6 A.M. she died from asthenia, having been free from delirium and quite conscious to the last.

This patient was from the first very despondent, and expressed doubts as to the probability of her recovery. Shortly before her death she remarked to the nurse in attendance on her, "The Princess Alice kissed her children when they were ill, and I kissed the children downstairs." She was menstruating during her illness. Some urine, however, was drawn with a catheter for examination, but was unfortunately thrown away.

(To be concluded.)

MR. SAMUEL STRETTON, M.R.C.S.E., has been placed on the Commission of the Peace for the Borough of Kidderminster.

EXCISION OF ONE LATERAL HALF OF THE TONGUE.

PRESENT CONDITION OF THE FIRST PATIENT, OPERATED ON IN 1865.

BY GEORGE BUCHANAN,
PROFESSOR OF CLINICAL SURGERY, UNIVERSITY OF GLASGOW.

IN the *Edinburgh Medical Journal* for November, 1865, I described an operation for removal of one lateral half of the tongue affected with epithelial cancer, which I had contemplated for some time, but first put into practice in the case of Mrs. M——, from Arran, on Aug. 12th, 1865. The proceedings consisted of dividing the lower lip in the centre; sawing through the lower jaw at the symphysis (as formerly done by Mr. Syme in his operation for removal of the whole tongue); separating the tongue and sublingual apparatus from the floor of the mouth; drawing out the tongue by two loops of strong thread passed through each side of the tip; cleaving the tongue in the centre, from the tip to the epiglottis; and then dividing the attachments to the hyoid bone with a probe-pointed knife.

The principle thus introduced, of removing only the affected lateral half by cleavage, has been variously modified by using the écraseur or thermo-cautère to divide the attachment to the hyoid bone, with the view of obviating the necessity of tying the lingual artery; but the surgeon has more certainty as to what he is cutting away, when he uses a sharp probe-pointed knife; and I have never seen any difficulty in tying the lingual artery in the stump, when the remaining half of the tongue is well pulled out. Also, on more than one occasion, I have seen it necessary to ligature the artery after the divided half of the tongue had been removed by the écraseur, and it was much more difficult to catch the mouth of the vessel in the crushed stump left by the écraseur than on the clean surface left by the knife. I incline therefore to return to the operation as I first performed it.

The only objection to this proceeding is what is applicable to all cases of epithelial cancer—viz., the possibility of the disease reappearing in the glands below the jaw or in the neck. But if the operation is undertaken before there is any affection of the lymphatic glands, and if the excision is effected wide of the diseased parts, then the relief, which in my experience is at all events uniformly temporary, is in many instances permanent.

The object of this short communication is to state, that this autumn Mrs. M——, the subject of my first operation, called on me to report that now, fifteen years after its performance, she remains in perfect health, with no annoyance from the loss of half of her tongue. She can speak quite intelligibly, though of course there is a little defect; and she can swallow quite well.

The tongue is rolled over on the cut side (as is the case usually after this operation), so that when it lies in the mouth, or is projected, it is narrow and pointed, like the tongue of a bird. There is not a trace of thickening, hardness, or pain.

A NOTE ON INTENTION IN THE DETERMINATION OF SEX, AND THE MENTAL AND PHYSICAL INHERITANCE, OF CHILDREN.

BY J. MORTIMER GRANVILLE, M.D.

THE laws determining the sex and the physical and psychical inheritance of children are not as well formulated as they ought to be, and the influence of intention, working under and through these laws, is therefore practically *nil*. It is scarcely creditable to science that this should be the case, considering the vast array of facts with which we are surrounded, all pointing to the conclusion that a better and fuller acquaintance with these laws would tend to the improvement of the human race, and the abatement of disease. Nor is the reduction of the laws of procreation and transmission to practice a Utopian project, inasmuch as their broad principles admit of application by individual pairs; and, subject necessarily

to the disturbing effect of collateral influences, they will produce the results which science enables the student of the principles of sex and heredity to predicate. It would be impossible within the limits of a short paper to give the evidence upon which the following conclusions have been reached, nor is it my purpose to attempt an argumentative proof of the propositions to be presently stated. A simple summary of facts observed independently, and now for the first time, so far as I am aware, brought together and submitted for consideration in their natural relationship, is all I contemplate. The inferences suggested certainly require, and they admit of, proof, but it must be left to time to work that out. I shall content myself with stating two propositions as briefly as the conditions of clearness will allow.

1. It has been shown by direct experiment with the lower animals, and is known to the most expert breeders of stock, that sex is determined by the relative ardency of the two parents. A preponderance of impulse on the part of the male parent produces female offspring, while excess on the part of the female parent produces male progeny. Facts commonly observed in relation to the human species show that the same law governs the determination of sex in man. Among these may be mentioned the following:—(*a*) The first children of quickly married parents are generally females. This is particularly noteworthy in the case of men marrying with a strong feeling of personal affection, or an especial desire for heirs. (*b*) Children born as the result of unions in which the female parent is not a consenting party, or is averse from the union, are almost invariably females. (*c*) Female children commonly resemble their male parents in early life, and at the successive periods of change occurring in the course of development and decadence. On the other hand, the offspring of unions, or periods, in which the female parent is the more ardent are nearly always males. (*a*) The first children of parents whose union has been long delayed are generally males; so also are those of unions in which the male parent is not specially attached to the female. (*b*) The offspring of unions in which the desire of the male parent for an heir has become less ardent, while that of the female parent has increased, are generally males. This is a very common experience, whose significance has been strangely overlooked. (*c*) Children born under circumstances in which the female parent is the more exigent are, with rare exceptions, male. Large families of boys indicate the existence of a constitutional excess of the procreative force on the part of the female parent, or a relative deficiency on the part of the male; while a family consisting of girls is proof of preponderance of the same quality in the case of the male parent. When an odd child of the opposite sex is born in the midst of a one-sided family, it is generally weakly, or in the proportional development of its mental and physical systems exhibits the weakness of the force which has exceptionally produced it. Children born late in the life of the dominant parent are frequently characterised by disproportionate development of the mental and nervous, or the more strictly *animal*, parts of the being. Of course, every rule has its exceptions, but the exceptions to these rules are very few. It commonly happens that instances which seem to transgress the general law of sex-determination are found on close inquiry to conform to it strictly. I believe that law to be one of the most universally kept, with the fewest exceptions, among the known orders of occurrence—which we call laws—of life and development. Granted the conditions necessary to establish a predominance of the procreative force on one side of the parentage, the offspring will be found of the opposite sex. Thus arises the question of "intention." Assuming that the conditions essential to a proposed result can be established, the event will almost certainly follow the measures taken for its production. This is the first conclusion to which the facts observed obviously point. Sooner or later science will recognise the significance of the lesson they teach.

2. The inheritance of mental and physical qualities, so far as the emotional temperament, the nerve-state, and the less permanent characteristics, are concerned, follows the line of the force that determines the sex; while the deeper constituent elements of the "nature," elaborated by family influences, pass directly from father to son, from mother to daughter. The new organic result—i.e., the offspring of the union, with its consequential and dependent properties,—will be determined by the law that makes all effective power the resultant of the combined forces of which it is composed. The inheritance will not therefore be simply the qualities of body and mind received from the dominant parent, *plus* what the less ardent parent contributes, but will be the mean of the two sets of qualities, in such state of combination as may be determined by the mental concord or sympathy of the parents, and the compatibility of their organic constitutions. With qualities of mind and properties of the organism—so far as these two series of phenomena may be separable even in thought or for the purposes of argument—are transmitted mental and physical defects, weaknesses, irregularities of faculty or form, and consequent abnormal proclivities; the several forms of disease and derangement descending in the same line with the constituent elements to which they are most closely related. Thus, peculiarities of temper, nerve-state, and habit, with their morbid tendencies generally, follow the oblique line from father to daughter; while the underlying elements and characteristics, both good and evil, pass directly from father to son, from mother to daughter, subject to the laws of development, to which we will advert presently.

The study in detail of the laws governing heredity has been too much neglected. Had it been pursued with greater care and industry we should not have heard of many strange terms that have crept into use even in technical phraseology. For example, "atavism" does not clearly or adequately express the fact it is employed to denote. The *seeming* absence of certain elements of the hereditary constitution in one generation and their re-appearance in the next or a later generation, is not a mere accident, but precisely what we should expect under the operation of the natural laws governing sex and heredity. Thus a father may transmit certain peculiarities to his daughter, and she will pass them on to her son, who consequently inherits from his maternal grandfather. The female link in the chain being incapacitated by her sex for the development of certain parts of the *entailed* inheritance, they lie dormant in her organism, to be transmitted, like vitalised but ungerminated seeds, to her offspring when she becomes a parent. That is understood, but that which is not so generally recognised is that this latency is not the simple consequence of incapacity on the part of the daughter to develop the inheritance in her own person, because of her sex; but the result of the repressive operation of other forces inherited by her directly from her mother. There are, in fact, two lines of inheritance—the direct and the oblique. To the former we owe the perpetuation of the likeness of body and mind observed in families bearing a particular name. The force acting in this line is the stronger, or, perhaps, I ought to say the deeper laid and more persistent of the two. This is proved by the preservation of characteristics in the direct descent. The oblique line tends to the dispersion of the inheritance through the daughters of a house and their male children. To make this clear, suppose the existence of two families which we will call respectively *A* and *B*. A male of the house *A* marries a female of the house *B*, and two children are born, a male *A B* and a female *B A*. A male of some other house, say *C*, marries *B A*, and has a child, *B A C*, who inherits the peculiarities of *A* transmitted through *B A*, thus dispersing the inheritance of the house *A* through the house *C*; but *A B*, the brother of *B A*, besides inheriting the surface characteristics of the house of *B*, obliquely through his mother, receives the deeper underlying qualities of the house of *A* directly from his father, so that the constitutional characteristics of the family *A* are handed down from father to son and preserved in the direct line with the name. If the energy of transmission were not stronger in the direct line of inheritance, with the descent, than in the oblique, it is easy to see that family characteristics could not descend intact, as is the fact in society. The direct force is superior to the oblique, though the introduction of powerful female elements into the line of descent may do much to weaken it. What we call "atavism" is due to the circumstance that in the case of a male child, although the energy of the female parent determines the sex and does much to influence the surface type of the organism, the force of the male parent preserves the constitutional type. This enables the male characteristics to reassert themselves in any generation in which the female influence, though sufficient for the determination of sex, is not so strong as to influence the whole course of development. Therefore the latency of peculiarities of constitution is not rhythmical, but irregular, the force directly transmitted generally, however, regaining its ascendancy in every second or third generation. The term "atavism" is not so much erroneous or inapplicable as inadequate. It does not explain or even define that which it designates. The laws of inheritance are inseparable from the

laws of development, which may be summarised as follows: 1. There is a force operating to produce an animal of the class *Homo*, in obedience to the law of the development of species. 2. There is another force gravitating upon this, the outcome of geographical, climatic, and racial energies and influences, which tends to give the animal so produced a *national* type. 3. There is a force, of which we have been speaking—namely, the energy of *family* exclusiveness. 4. There is the *individual* entity, which embodies the sum of the ancestral energies so far as these have been transmitted or may be revived.

Intention in relation to heredity is the purposive employment, interruption, or control of the laws known to us, for the production of a given result—such as the extinction of disease or deformity, and the engrafting of a healthy stock. It cannot be doubted that science has a wide, and as yet unworked, field of enterprise in this department, from which the richest and best fruits may hereafter be gathered. It lies within the scope of the medical profession to attempt the cultivation of this field, but before good work can be accomplished the subject must be investigated and the province thoroughly explored. One of the first and most suggestive considerations in connexion with the practical aspects of this subject is that it is by repression as well as desuetude the evil parts of an inheritance are to be destroyed. It seldom happens that a morbid or evil element in the entailed estate of nature can be directly eliminated, but it may be starved and crippled and finally destroyed by repression and exhaustion. We can only eradicate *special* disease by the cultivation of *special* health. It is not enough to keep an inherited defect or evil tendency in abeyance, some healthful quality or property of the nature should be encouraged to over-lie and restrain it. Some sturdy branch must be trained across it. Diseases and morbid tendencies do not die out by virtue of neglect alone. They are only to be destroyed by the cultivation of other characteristics of organic form or function; of "nature" or "habit"—to use vague terms loosely—which have antagonistic or incompatible tendencies. It is not commonly within the power of the physician to make or mar the unions to which affection or policy impels adults; but it *is* strictly within his province and duty to offer advice that shall help to mitigate the evils, and enhance the advantages, of such unions as have been contracted. And the family medical adviser can generally find opportunity to direct a course of training—physical, mental, and moral—for children which will tend to the fostering of any inherited, though latent, forces that may be capable of being used to repress or repair the defective traits of the young organism. We leave too much to chance in relation to the propagation of the species and the improvement of the race. "Intention" has a part to play in the determination of sex, and in the revival or repression of inherited forces, by an intelligent use of the laws of Nature, which is not yet even recognised.

Welbeck-street.

CASE OF TRAUMATIC TETANUS.

By JAMES MORE, M.D.

ALTHOUGH the following case had a fatal termination, it is, I think, a good illustration of the therapeutic value of chloral hydrate in cases of traumatic tetanus. The attack was one of extreme severity, and, clinically speaking, had three distinct stages, each having characteristic features of its own, marking alike the progress of the malady and the effect of the remedies.

A. B——, a strong, healthy-looking coachman, forty-three years of age, had his middle finger crushed in a chaff-cutter. Adhering too rigidly to conservative surgery, tissues were unfortunately left in the first dressing, which sloughed, exposing and ultimately necrosing the bone to the middle joint of the finger. This may or may not have had anything to do with the occurrence of tetanus; but nevertheless decided symptoms of this dire malady set in just ten days after the accident.

His symptoms and appearance correspond precisely with the classical description of the most acute form of traumatic tetanus; for he had pleurothotonos, opisthotonos, well-marked risus sardonicus, clenching of the jaws and grinding of the teeth, difficulty in breathing, in speech, and deglutition, high temperature, quick pulse, and profuse sweating. These symptoms lasted, with little or no intermission, for twelve days, rising quickly to a pitch of intensity, with almost continuous pleurothotonos, and then again gradually subsiding to a state nearly free from tetany, and characterised chiefly by extreme weakness, moist skin, a pulse 120, full, soft, and compressible, and a mean temperature of 100°. During the intensity of his attack, his body seemed fixed in a curve, his disabled hand pressed against the wall to prevent himself, as he told me, being forced out of bed. The risus sardonicus, which up to the ninth or tenth day after attack, and before chloralism was established, had been most marked, was gone. He now slept well, could swallow easily, and felt free from the terrible sternal tetanic pain.

This improvement in all the more urgent symptoms was not, however, quite decided till Nov. 23rd—i. e., the nineteenth day of attack. Before this date was reached the tetanic paroxysms, though not occurring as it were rhythmically or continuously, were still easily induced. Thus, being sick one morning he vomited, and this brought on intense spasm in the laryngeal muscles, so that for an hour his attendants thought he would have died. Again, during one of my early visits I witnessed one of these induced attacks. In drinking some wine-and-water rather hurriedly a fit of choking came on, with clenching of the jaws and grinding of the teeth, his mouth being filled almost at once with viscid mucus. On his brother attempting to raise his head his body arched from occiput to heels, so much that I could easily have passed a pillow under him from one side of the bed to the other. He was then bathed in perspiration, and his pulse was hard, full, and varied from 120 to 130. The treatment up to this time had been thirty grains of chloral hydrate every four hours, a morphia and belladonna suppository at bedtime, and the bowels kept open by giving each night an enema of turpentine and castor oil.

On the nineteenth day decided improvement set in. His face looked placid and cheerful, the tetanic paroxysms had now almost left him, his pulse had lost its extremely high-tension character, being only 98, and though full was fairly compressible. His skin was moist, and the temperature 98°. Thinking his recovery assured, and keeping in view the fact that tetanus kills not so much by the lethal grasp of its paroxysms as by the fatigue and exhaustion induced by the force of the muscular movements, I reduced to a considerable extent the dose of chloral, and this the more as I dreaded its weakening effect upon the already exhausted heart. That this was premature may be imagined, when I record the fact that no sooner had my poor patient got from under the relaxing influence of the chloral than all his symptoms returned, and that with even greater force and intensity (I had almost said malignancy) than before. This recurrence of the tetanic symptoms was in part, as above indicated, due to the too precipitate withdrawal of the chloral, but the immediate cause, I believe, was due to intense bronchial irritation. The weather at this stage of his illness was, perhaps, colder than any we have had for some years. Snow was on the ground, and some nights twenty-seven degrees of frost were registered. There was no fireplace in his bedroom, nor, indeed, upstairs, and though I had a stove fitted up the cold was so intense that even his nurses had to have bottles of hot water to their feet to keep them from shivering. What wonder, then, that, with a moist perspiring skin, dilated arterioles, involving extreme heat-loss, this apparently trivial bronchial disturbance should run quickly into an intense and acute attack of capillary bronchitis.

About the twenty-first day my patient began to have fits of coughing, each fit, to my chagrin, being accompanied and followed by tetanic paroxysms in the laryngeal and respiratory muscles. These tetanic symptoms were quite decided, though still induced, not spontaneous, as at first, but like the necessary discharge of accumulated reflex irritation. When not coughing he seemed calm and free from tetanic spasm, and after expectorating the now muco-purulent phlegm, he seemed, though exhausted, fairly comfortable. To meet this dangerous array of symptoms I felt constrained, in spite of the pulmonary mischief, to return to the chloral, and that in increased doses. I now gave sixty grains of chloral twice in the day, and with it twenty grains of bromide of potassium and fifteen drops of tincture of digitalis. In the bromide I hoped to find a remedy which, with the chloral, would tend to soothe the inflammatory mucous membrane, as well as the tetanic irritation of the laryngeal and respiratory muscles, whilst the digitalis I hoped might

act as a slight cardiac stimulant; for surely this was needed, not only on account of the exhaustion arising from the paroxysms themselves, but on account of the possible weakness resulting to the heart from the large doses of the chloral.

By the twenty-second day the chloral mixture had again improved the general condition of this complicated case. He slept quietly most of the previous night, though on Nov. 26th he had one bad attack of opisthotonos, during which his bowels were forcibly moved in bed. The tetanic tension in the abdominal muscles must during this attack have been very great, for, besides the fact of the fæces being forcibly extruded into the bed, he passed wind with a loud, prolonged, sonorous sound, different from anything I have ever heard. The first night he was under the increased doses of chloral he seemed on awaking to be quite delirious, but this, though furious, soon passed off and did not again return. I suppose this symptom cannot be credited to the chloral alone, but it and the high tetanic tension in the arterioles of the brain carried the state of the cerebral anæmia a little too far.

Twenty-fourth day (Nov. 28th).—Since last report my patient has slept fairly well. His pulse (120) was very full, weak, and at times thrilling under the finger. From this date the force of the tetanic paroxysm seemed completely broken. Temperature still under 100°. He had no return of the choking fits, but there was a decided increase in the bronchial mischief. The breathing was shallow and râles were heard in the upper as well as the lower parts of the chest. Cold still intense.

Twenty-fifth day.—A comfortable night, having had four hours and a half continuous sleep. At this date stimulants began to flush him. During the tetanic period he remained under all circumstances unusually pallid. There was evidently now extreme dilatation of the cutaneous arterioles, either the result of the bromide and chloral or the removal of the tension-factors, for the paroxysms had entirely left him.

Twenty-seventh day.—Bronchial irritation worse. To-day his chest was choked up with viscid phlegm, again tending, though in a different direction, to suffocation. Pulse 120, and thrilling under the finger. Breathing 40, face much flushed, the tint being partially cyanotic. For some days he has taken no chloral, but a mixture of ammonia, bromide of potassium, bark, and senega.

Thirtieth day.—General condition of chest not improved. Breathing shallow (50), pulse 100, and to-day, for the first time, showing indications of halting. At times the purplish tint on the face passes into a dusky grey. Temperature 100°; still able to take plenty of nourishment.

Thirty-first day.—My patient died; just forty-one days since receipt of the injury to his finger, and thirty-one since the onset of tetanus.

Such are the facts of this distressing case. Nothing succeeds like success; yet, in spite of its fatal termination, I claim for this case that it is an illustration of the value of chloral hydrate in tetanus. But for the intensely cold and frosty weather, my patient in all probability would have recovered. The first series of tetanic symptoms were undoubtedly controlled by the chloral, and so were the second, though not in such a marked degree, for it might be urged that these tetanic symptoms, purely reflex in character, had, like other reflex irritations, simply worn themselves out. In chloral, with its recognised power of relaxing muscular spasm and abolishing reflex action, we have, as it seems to me, the remedy for all forms of tetanus; but it should be given at once and in large doses, and certainly not withdrawn till all reflex tendency has subsided.

Rothwell, Northamptonshire.

A CASE OF SYPHILITIC ENLARGED SPLEEN IN A CHILD.

By W. J. TYSON, M.B., F.R.C.S.

THE following case is interesting as illustrating how a very large spleen under treatment may become imperceptible, the patient remaining perfectly well, and also as showing that at times the syphilitic poison seems to concentrate itself in one organ, and there exhausts itself. The family history is a profusely specific one, leaving little doubt as to the cause of the splenic enlargement.

The mother, now thirty-nine years of age, has been married nineteen years, during which time she has had thirteen children, and is expecting another next month. The third, fourth, and ninth were still-born; the fifth at ten years old became stone-deaf, and is so now; he had interstitial keratitis. At the present time there are remains of an old iritis; the incisor teeth are notched, and the molars of both jaws are rimmed. The thirteenth had soon after birth a well-marked buttock-rash.

The mother I saw in July, 1875, suffering from a breaking-down gumma of the soft palate, and also perforation of the septum nasi. Since this she has had at various times localised headaches in the region of the temples, coming on always in the evening, generally about seven; this pain being always relieved markedly by mercurial preparations.

The eleventh child, a boy, the subject of this paper, one of twins, was born in May, 1875. Soon after its birth the mother states that the abdomen was enlarged, but he was not seen by me until May 26th, 1877, then two years old. He was pasty-looking. The spleen extended in a downward direction for three and a half inches, reaching the crest of the ilium; in front it approached closely to the umbilicus. The liver was not enlarged. No albumen present in the urine. He was ordered mercury with chalk, one grain every morning and evening; and one grain of iodide of potassium with ten minims of syrup of iodide of iron to an ounce of water, three times a day. On Aug. 1st the spleen was decidedly smaller, and on Oct. 20th it was only one inch below the margin of the ribs. There are no more notes of the case until Sept. 16th, 1878; at this date the spleen was imperceptible and the child in excellent health. The above medicine was taken, as far as I can remember, more or less regularly for about a twelvemonth.

Remarks.—I believe that there have been very few cases recorded of large syphilitic spleens in children becoming imperceptible, the child remaining well. I have seen the child this day (Aug. 24th, 1880), and he is perfectly well and free from all visible or palpable syphilitic changes. As these cases improve under the ordinary syphilitic remedies, one would naturally suppose the change in the spleen to be of a specific character, but so far this has not been proved to be so. The change is not an amyloid one. In Dr. Gee's two post-mortem cases, the enlargement seemed to be a simple hypertrophy, and in one there was some thickening of the capsule.

Folkestone.

CASE OF

PERFORATION OF MEMBRANA TYMPANI FROM ASCARIS LUMBRICOIDES.

By LEWIS W. REYNOLDS, M.R.C.S. Eng.

ON March 3rd I was called to see a woman, aged thirty-five, three or four months advanced in pregnancy. She was in a low nervous state, and had been suffering since Christmas from nausea and vomiting. About two weeks before she had vomited several round worms, and about the same time suffered severely from dyspnœa and intense pain in the chest and abdomen. Shortly before my arrival she had vomited two, and three more were discharged from the nostrils, her nose bleeding first for three hours. I prescribed four grains of santonine powder, to be taken at bedtime; after taking which four worms were passed per rectum, for the first time. The santonine was followed next morning by fifteen grains of compound scammony powder, when a great many more were passed per rectum. Three or four hours after taking the second powder, and having previously suffered all night from intense earache, a neighbour discovered a worm protruding from each ear and both ears bleeding; the same day three others came away from the ears, two from the left and one from the right. The following morning, March 5th, her husband drew another from the ear, and again on March 8th; this last was four inches long with the diameter of a small goosequill. A large number were also discharged each day by the bowel, making in all seventy-four.

On March 10th, and again on March 13th, my patient vomited a large quantity of dark blood, and complained at the same time of a feeling of tenderness in the abdomen, for which I gave demulcents.

On March 17th, in the evening, I was called to see her,

and found her perfectly insensible, having been so since midday; her temperature was below normal, but with a fairly good pulse; she was roused again about midnight. The attack appeared to me hysterical. From this time she has gradually improved in health, but has had occasional attacks of diarrhœa.

May 12th.—For the last few days blood has trickled from her ears and down her throat, which she coughs up. On examination with the auriscope, there is now, as there was in March, excoriation of either meatus and a large perforation of both membrana tympani, but the sense of hearing is very little impaired.

Remarks.—The history of this case appears at first almost incredible; but there can be no doubt the membranes were perforated by the passage of the ascarides. In addition to being vomited, some must have crawled up the œsophagus into the fauces, thence some found their way into the nasal passages, and others into the Eustachian tubes, perforating the tympanic membranes and being discharged by the external auditory meatus.

High Wycombe, Bucks.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

UNIVERSITY COLLEGE HOSPITAL.

[THROAT DEPARTMENT.]

CASES OF PARALYSIS OF THE LEFT VOCAL CORD.

(Under the care of Dr. POORE.)

THREE cases of this form of paralysis have lately been under observation, and since the cause of the paralysis was probably different in each case they form an interesting group.

The first patient, a man aged forty-eight, a cabman, complaining of hoarseness and occasional attacks of dyspnœa, was sent into the surgical wards under the care of Mr. Heath because a laryngoscopic examination made elsewhere had led to the diagnosis of a polypoid growth in the larynx. Mr. Heath sent the patient to the throat department for examination, and it was then at once determined that no growth existed, but that the left vocal cord was completely paralysed. The erroneous diagnosis of growth had probably arisen from the appearance presented by the oblique distortion of the glottic aperture which is so common in these cases, and from the fact that the left cord was almost completely hidden by the left ventricular band, which was somewhat swollen. Laryngoscopic examination produced on two or three occasions violent attacks of dyspnœa. The cause of the paralysis was not at first very obvious. The neck presented no abnormality. The chest was well formed, and without any abnormal prominence. The expansion of the left side of the thorax when compared with the right was slightly deficient, and on very careful percussion an exceedingly trifling deficiency in resonance was detected in the second left interspace, close to the sternal border. On auscultation no abnormal heart sound or bruit was audible, but the respiratory murmur was somewhat weaker on the left side than the right, and on applying the stethoscope in the second left interspace a slight pulsation was communicated to the head of the auscultator, which pulsation was scarcely appreciable to ordinary palpation. Taking all the symptoms together it was considered highly probable that an aneurism existed in the third part of the arch of the aorta, which by its pressure upon the left recurrent laryngeal nerve produced the paralysis of the left cord, and by its pressure upon the left bronchus caused the slight deficiency in respiratory power on the left side. He was admitted into the medical wards, and after rest in bed his attacks of dyspnœa became less urgent, but the paralysis of the cord remained unaltered. When he left the hospital and returned to his work his dyspnœa returned, and the symptoms of aneurism, which were most obscure at first, became well developed and undoubted.

Remarks.—This case is of much interest, as showing the great value of the laryngoscope in the early diagnosis of aneurism and other thoracic tumours, since without its use to stimulate the physician to a very careful examination of the chest, the slight and doubtful symptoms of aneurism which at first were present would in all probability have escaped detection.

The second case was that of a horsekeeper, aged fifty, who came to the hospital suffering from hoarseness and some difficulty in breathing, and general weakness. A laryngoscopic examination showed a well-marked paralysis of the left vocal cord. There were no indications whatever of the presence of aneurism or other thoracic tumour. The larynx, however, appeared somewhat prominent, and there seemed to be some undue solidity and bulk about the neck, although no distinct tumour was anywhere observable. A few weeks after his first visit he came to the hospital with a piece of meat stuck in the upper part of his gullet, which was removed by the house-surgeon, and a similar accident happened to him a few weeks later. A further examination showed that there was no paralysis of the larynx; and on trying to pass an œsophagus bougie with great gentleness into the stomach, an obstruction was encountered not far below the upper extremity of the gullet. It was highly probable that the obstruction of the œsophagus and the pressure on the recurrent laryngeal nerves which caused the paralysis of his left cord, were due to the same cause. Whether this was malignant or not was never clearly made out, as the patient disappeared when the hospital was closed for repairs.

The third case was that of a shoemaker, aged sixty-four, who was sent to the throat department on October 15th, 1879, from one of the other departments of the hospital, suffering from almost complete aphonia and great shortness of breath. On examining the larynx the fact of complete paralysis of the left cord and slight laryngeal catarrh was fully established. On examining the chest, the left side was seen to be smaller than the right and almost motionless during respiration. There were the ordinary signs of pleuritic effusion rising to the level of the second rib in front, third rib in axilla, and the spine of the scapula behind. Above the level of absolute dulness in front the resonance was defective, especially towards the left sternal boder. The right lung presented all the signs of emphysema, and the general form of thorax was of an emphysematous type, with a large antero-posterior diameter. The superficial arteries were everywhere tortuous and pulsated visibly, the right carotid appearing to pulsate rather more forcibly than the others. The heart-sounds were normal, the radial pulses were equal, and there were no indications whatever of thoracic aneurism or other tumour. The history of the onset of the illness was that of acute pleurisy, the patient stating that he had been taken suddenly ill about three months previously with a stitch in the side and sternum. Failing to discover any other cause for the paralysis of the left cord present in this patient, it seems warrantable to conclude that the thickening of the left pleura has implicated the recurrent laryngeal nerve at its origin, a condition which is enumerated by Niemeyer among the causes of paralysis of this nerve.

Temporary immobility of the left vocal cord was present in a middle-aged woman who was suffering from moderately severe laryngeal catarrh, with a good deal of mucous exudation. On first examining the larynx the left cord was seen to be completely immovable, and a diagnosis of paralysis was hastily made, but during a violent attack of coughing the cord, which was apparently mechanically fixed by tenacious mucus, freed itself, and was then seen to move with perfect freedom. This patient completely recovered.

NEWARK HOSPITAL.

OPIUM POISONING; RECOVERY.

FOR the following notes we are indebted to Mr. J. D. T. Reckitt, house-surgeon.

Ann B——, aged forty-nine, carried on a truck to the hospital by two policemen and her husband, was admitted at 6.30 P.M., Feb. 11th, 1879, perfectly comatose, with stertorous breathing, and a pale, ghastly countenance. The pupils were contracted to a very minute point, and the conjunctivæ were insensible to touch. The breath smelt strongly of spirit, but not of opium. She was totally unable

to stand; in fact, there was complete muscular relaxation, with an extremely feeble pulse. When admitted an hour and a half had elapsed since drinking some laudanum. The husband stated that she had been drinking more or less for some weeks, and was habitually intemperate, gin being her favourite beverage. She often suffered from toothache and pain in the leg. To-day she had applied some laudanum to her leg, and had been drinking gin freely. She was supposed to have taken nearly an ounce of laudanum, purchased of the druggist. She was not an habitual opium eater.

The stomach-pump was immediately applied, and a pint or so of warm water injected. This somewhat roused her and excited vomiting of stained fluid, but without the smell of opium. Strong solution of ammonia was held to the nostrils, which had a decided impression, and after a time, and by means of loud shouting, she was induced to swallow a mustard emetic, which immediately caused free vomiting. Half an hour after this the pulse had improved in tone. Half a pint of the strongest coffee was then given, which, however, she did not retain long. One hour after admission she had still a very strong desire to sleep. The application of the wet towel to face and chest, and ammonia to the nostrils was therefore freely practised; and two hours after admission she was taken into the open air and promenaded by two attendants. The woman was very noisy, and inclined to resist, saying she wished to sleep, but the efforts to keep her awake were steadily persevered with until 2 A.M., when a full dose of compound spirit of ammonia was given, and she was taken to lie down for an hour. The pupils were nearly natural at 3 A.M., though she was then very sleepy. She was indulged with an occasional walk in the ward until 7 A.M., when she ate a fair breakfast, and at 12 o'clock she was discharged, being escorted to the police-station by two policemen.

Remarks.—From the appearance of the patient on admission, the assistant-surgeon, Mr. Smith, who was present during the first part of the treatment, concurred in an unfavourable prognosis; but happily the patient was fairly roused at the commencement, and kept so by the passive motion, until the state of the pupils indicated safety. Thus the ordinary treatment was enough to overcome what appeared dangerous poisonous effects.

KASHMIR MISSION HOSPITAL.

DISLOCATIONS OF THE HIP-JOINT.

(Under the care of Mr. E. DOWNES.)

FIVE cases of this accident have been treated within a comparatively short time. Two were recent cases, and both into the obturator foramen. In these two cases there was lengthening and eversion. Both were reduced at once by manipulation—viz., by flexing the thigh on the abdomen and rotating inwards, and adduction.

The other three were on the dorsum ilii, and were all three old cases.

One was of three months' standing, and though reduced under chloroform easily, and at the time most satisfactorily, the case did not turn out well. The man was old, weak, and infirm; and after the splint had been applied about a week he complained very much of pain, and suffered from diarrhœa—in fact, it was thought that he might die. The splint was taken off at his urgent request, and he unwisely and contrary to expressed entreaties, insisted on flexing the limb. The consequence was that after awhile the limb could hardly be straightened, and was found to be decidedly shortened, and there was great thickening near and above the trochanter. The man became so weak that his life was despaired of, but he finally so far recovered that after some two or three months, when he left the hospital, he used to walk about with the aid of a crutch. The thickening about the trochanter remained, but the pain disappeared; the leg and thigh were somewhat flexed and could only be straightened with difficulty, but there was no inversion or eversion; there was, however, about two inches of shortening. As far as could be made out, the head of the femur was in the acetabulum.

The other two cases are the more interesting ones, and were much alike. The first was seen in December, 1878. The patient was a young man about twenty, strong, healthy, and fairly muscular. The femur was dislocated on to the dorsum ilii; the position of the limb, with the foot pointing across the instep of the other foot, left no room for doubt. He said that it had been in that position for about six months, and there seemed to be no reason for doubting this statement, for he said that the accident had occurred from a fall from a mulberry-tree which he had climbed for the sake of the fruit and the mulberry season is from the beginning of June to the middle of July. The first inclination was to leave the limb alone, but the young man begged that something should be done. He was placed under chloroform, and the thigh was forcibly flexed on the abdomen, and then brought down and abducted, and rolled outwards. After one or two attempts, a crack was heard and felt, as if the neck of the femur had been broken, but the limb came down to its natural position, with the head in the acetabulum. There was free motion and no crepitation. There was very little shortening; the limb was put up with a long splint. The patient afterwards complained very little of pain, and the splint was worn for a fortnight. At the end of this time the splint was removed, and there was not much shortening. After a few days he complained of some pains on pressure in the position of the head of the femur. Day by day a thickening in that region became more and more apparent, and the limb became shorter. The splint was reapplied, but without effect, and at last it was left off. After the patient had been in hospital a month he went home. There was then no pain to speak of; the thickening was decided, not only over the head of the femur, but in the position from which it had been reduced. There was distinct shortening of the limb of about an inch, but there was good motion at the joint, and no inversion or eversion of the limb. Notwithstanding the shortening he had a useful limb, and walked well with a stick.

The third case was very similar. The patient was admitted in December, 1879. Like the previous patient, he too had fallen from a mulberry-tree about six months before, and the head of the femur had been dislocated on to the dorsum ilii. He was a lad of about fifteen. He crawled into the out-patient room with the dislocated limb shortened nearly three inches, and the femur pointing across the sound thigh at some height above the knee. He was placed under chloroform, and the dislocation was reduced even more easily than in the former case; no crack was heard when the head of the bone entered the acetabulum, and there was a little shortening—about one-third of an inch—after reduction. In the former case there was no shortening at all immediately after reduction was effected. Extension was tried perseveringly, but the shortening remained; there was no crepitation; the motion of the hip-joint was free, and there was neither inversion nor eversion of the limb. The limb was put up with a long splint. After about a week he took off the splint himself in the night. It was not reapplied, and he never complained of pain again. There was no thickening about the head of the bone, and the shortening did not increase. He left the hospital in a month, with a very good limb.

Remarks by Mr. DOWNES.—It may be thought that the success was not very great in these three cases; for in the first case there was considerable shortening and great thickening about the joint; in the second, there was nearly an inch of shortening and some thickening; and in the last, though there was no thickening, there was one-third of an inch of shortening. It may be even thought possible that the reduction was not real, but possibly only a change of dislocation on the dorsum ilii to that in the sciatic notch; but I feel sure that this reduction was fully effected in all three cases, though I cannot explain the shortening and thickening which occurred subsequently in the two former cases. My reason for thinking this are—(1) that in the two least successful cases there was no shortening whatever, or, at any rate, extremely slight shortening at the time that the reduction was effected; (2) in all three cases the motion of the hip-joint was perfectly free after reduction, and in the two latter cases continued to be so; (3) there was neither inversion nor eversion of the limb at any time in any of the three cases.

Regarding the amount of success achieved, even in the first and least successful case no harm was done, on the contrary, he left with a better limb in every way than before the operation. In the last two cases the limbs were very useful ones when they left hospital, though on admission they were perfect cripples. The last two cases are further interesting because there are very few records of dislocation of the femur of such long standing having been reduced by

simple manipulation. The public fancy that bone-setters succeed in cases considered unfavourable by surgeons; but after the experience of these cases we should do well to be careful in deciding that a case is "best left alone," as in being over-rash. It may be observed that Orientals have not the muscular development of Europeans; their hip-joints also are very pliable, owing to their habit of always sitting down cross-legged; it is therefore hardly to be expected that the same successful results could be obtained in the case of Europeans with as little trouble as I had with my Kashmiri patients.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Dilatation of Central Canal of Spinal Cord.—Pyocephalus.—Fibroid Tumour of Uterus.—Myeloid Tumour of Tibia.—Fatty Tumour of Larynx.—Fatty Tumour of Scalp.—Acute Necrosis of Tibia.—Osteitis of Femur.—Paralysis of Cranial Nerves in Congenital Syphilis.—Fracture of Coracoid Process.

THE first meeting of the Pathological Society for the present session was held on Tuesday last, Oct. 19th. The President, J. Hutchinson, Esq., occupied the chair. The number of specimens exhibited was less than usual, but the interest of the meeting was well sustained throughout.

Dr. NORMAN MOORE showed three specimens. The first was a Spinal Cord removed from a woman, aged twenty-two, married, recently in St. Bartholomew's Hospital. Two years previously she began to lose power in the left arm, and eighteen months later in the right arm; she had complete power in the legs. There was partial and varying anæsthesia above the deltoid muscles. The breathing was hoarse, but there was no growth, thickening, or other obvious change in the larynx to account for it. Death occurred suddenly in an epileptiform attack. At the autopsy the ventricles of the brain were found greatly distended with clear fluid, and the central canal of the spinal cord was dilated to the size of the finger. The case was of interest from the small amount of symptoms produced by such an extensive change in the cord, and from the rarity of hydrorachis, apart from imperfection of the bony walls of the spinal canal. The second specimen was the Brain of a child, aged five months, who came to the Metropolitan Free Hospital with slight cervical opisthotonos; the eyes were normal. It was admitted into St. Bartholomew's, and ten days later the temperature rose to 101·2°, and even to 103·6°, and on the thirteenth day the child died in a fit. The child had been quite well till a week before it was seen, when it had a fit and cervical opisthotonos. The lateral ventricles of the brain were very much dilated, and each contained more than one and a half ounces of pus; their lining membrane was intensely injected; the pus extended also through the fourth ventricle into the sub-arachnoid space and canal of the cord, and there was abundant lymph around the medulla oblongata. Drs. Barlow and Gee have published twenty-five cases in which, after symptoms of slight cervical opisthotonos, the autopsy has revealed meningitis with lymph, especially about the base of the brain. Dr. Moore thought that his case showed a later stage of the same affection, and that the pyocephalus came on with the sudden rise of temperature. The third specimen was a large Calcified Uterine Fibroid, found by Dr. Godfrey of Jersey, while making the post-mortem in a case of cirrhosis of the liver. There had been no symptoms referable to the tumour during life.—Dr. F. TAYLOR had shown a spinal cord with a large cavity in it some time ago, and then had referred to the literature of the subject and found references to many similar observations. He asked if an examination had been made to prove the relation this cavity bore to the rest of the cord, for it was at present an open question whether these cavities are dilatations of the central canal, or arise from degeneration of the cord, or softened tumours. They are always seated towards the back of the cord involving the posterior columns. In most of the cases the symptoms have been slight, or inconsistent with the extent of the cavity. Dr. Moore's case was the largest cavity he had seen or read of. In his own specimen the cavity extended from the mid-dorsal region to the lumbar enlargement, and there was a separate cavity in the neck, with dilatation of the ventricles of the brain. In some cases the central canal has been found separate from the cavity.—Dr. N. MOORE had only made a naked eye examination of the cord. He had previously seen a case in which there was during life loss of power in the arms, and post mortem a small cavity in the cord, which was evidently a dilated central canal.—Dr. EWART referred to a case of a woman of middle age who died from insidious ingravescent paraplegia, in whose spinal cord was found a cavity four inches long and a quarter of an inch in diameter, tapering at each end, and occupying the mid dorsal region. He had seen a less degree of the same change in a child.

Mr. MCCARTHY exhibited a specimen of Myeloid Sarcoma of the Head of the Tibia. Early in this year a woman, aged twenty-three, came to the out-patient room of the London Hospital, complaining of pain in the right knee. She was strumous looking, and appeared to be ill. On examining the knee there was nothing the matter with the joint, but on the inner side of the head of the tibia there was a small, irregular, painful and tender swelling; the skin over it was red, and fluctuation was to be detected. The woman was admitted to the wards and considered to be suffering from a suppurating bursa. The rest in bed quickly led to the disappearance of the redness, heat, and pain, though the fluctuation continued. A day or two later the swelling was found to pulsate, but this varied in intensity very much from day to day. There was no bruit, and if the femoral artery was compressed the pulsation ceased, but returned gradually on removal of the pressure over the artery. Blood withdrawn by a small trocar showed giant cells. Amputation was performed, and the application of Esmarch's bandage caused fracture of the head of the bone. On opening the joint it was found that the growth had spread up the crucial ligaments, and the lower end of the femur was therefore removed. Although treated antiseptically, the temperature continued high, and there was a very profuse discharge of dark thin fluid from the wound for several days, with excruciating pain on any movement. Death occurred from exhaustion on the twelfth day. At the post-mortem the wound was found to be nearly healed; the bone healthy; but the supra-patellar pouch of synovial membrane was found inflamed, covered with lymph and containing pus. Here lay the probable cause of death. The head of the tibia was entirely replaced by the tumour, except at the back, where a piece of bone one-sixteenth of an inch thick remained. The cartilages of the tibia were intact, but between the joint surfaces where there was no cartilage the tumour had destroyed the bone, and spread up into the crucial ligaments. The case was of interest, partly from the slight symptoms the tumour produced.—The PRESIDENT called attention to a fresh specimen of Myeloid Tumour of the Femur that he had placed on the table.—Mr. BUTLIN remarked that there were only two or three cases where the tumour had spread from the tibia to the femur through the crucial ligaments; he had seen one case where an ossifying round-celled sarcoma of tibia had thus grown, and the lower quarter or one-third of the femur was full of the tumour; as an example of the less degree of malignancy of these central tumours, he mentioned that he knew this patient to be alive and well four years and a half after amputation through the thigh.

Mr. SYDNEY JONES showed two Fatty Tumours. One was as large as a Tangerine orange, with a pedunculated attachment to the right aryteno-epiglottidean fold. It was met with in a man forty years of age; on opening his mouth nothing abnormal was seen, but when he gave a peculiar gulp the tumour was brought up and lay on the dorsum of the tongue. It was removed by freely dividing the mucous membrane of the pedicle and turning it out. A small cyst lined by stratified scaly epithelium was found in it. The other specimen is described in THE LANCET for Oct. 9th, page 587.—Mr. R. PARKER mentioned a small fatty tumour of the tongue which had been sent to him by the President.—Mr. MORRANT BAKER stated that a child was brought to the Evelina Hospital who by a gulp brought into the mouth a tumour the size of the thumb, which was attached to the soft palate by a broad pedicle. He ligatured the pedicle and cut off the growth, which consisted of fat fibro-cellular tissue and a central rod of cartilage. He

thought that possibly Mr. Jones's case was a fœtal development of some kind long unnoticed.—Mr. MACCORMAC referred to a fatty tumour which he had removed from under the scalp over the parietal eminence. It was as large as a bun, weighed five ounces and a half, was firmly moulded over, and in places adherent to, the pericranium. The outer part of the tumour was pure fatty tissue, but in the centre of the mass was a cavity full of ordinary sebaceous matter. The patient was a girl aged fourteen, and the tumour had only been noticed two years previously, when it was the size of a bean.

Mr. MORRANT BAKER (for Dr. Gregory White of Bournemouth) showed a specimen of Acute Necrosis of the Tibia. A boy, eleven years of age, was struck on the leg with a fir cone; two days afterwards he complained of pain below the knee. On admission to the Bournemouth Cottage Hospital three days later the temperature was found to be 103°, and the skin of the upper half of the leg was red, glazed, and swollen; an incision was made, and pus evacuated; and subsequently a profuse discharge continued. A month later amputation through the thigh was performed. The specimen was a good example of osteo-myelitis with necrosis. Mr. Baker referred to the often trivial injuries alleged to be the cause of most severe osteitis, frequently accompanied by septicæmia, and ending fatally.—Mr. GODLEE thought that there was evidence of the constitutional, rather than purely local, origin of this disease, in that more than one bone was sometimes affected at the same time—as the femur and radius; that the children were usually ill for some little time before the local lesion appeared, and that often there was no history of injury whatever.—The PRESIDENT reminded the Society that Mr. Simon wrote some years ago on what he called "Necrosal Fever," and then pointed out that many bones might be affected. He himself had seen many examples of multiple necrosis, and had now under his care a girl who had lost nearly the whole of the shaft of one tibia, after which the tibia and humerus of the opposite side were attacked in a similar manner. He did not think that the children were always ill before the disease came on, but believed that there was always an injury, which might, however, be very slight. In this form of multiple necrosis one bone was attacked first, and the others subsequently, and, in his opinion, secondarily, as a result of the first—as truly so as is the case in infecting tumours. He had noted that the secondary form was never so severe as the primary, and that it was not very uncommon to find a threatening of suppuration, which was not carried out. He imagined that in such forms of inflammation there was a parallel condition to what is held to occur in new growths; that from the primary area of inflammation products were discharged into the blood current which lodged elsewhere, and set up the secondary disease. He had not seen a marked tendency to pyæmia in cases of multiple necrosis, though no doubt it may occur.—Mr. C. HEATH alluded to the multiple necrosis after typhoid and scarlet fevers, as evidence of the constitutional origin of necrosis. Mr. Marcus Beck, who had studied these cases closely, thought that there was a specific fever in acute necrosis; but Mr. Heath believed there was usually to be obtained a history of injury to a previously healthy child. He had sometimes thought multiple necrosis to be pyæmic in nature, but he had never found an abscess in the lung or liver in such cases.—Mr. GODLEE explained that he had not referred to a previous condition of chronic ill health, but believed that he had seen cases where there was fever before any sign of local mischief.—Mr. HOWSE asked what evidence there was of necrosis in this case.—Mr. BAKER replied, that there was a distinct central sequestrum almost separated from the rest of the bone. He had seen several cases of most acute septicæmia with acute necrosis, where there was a pustular eruption, pyopericardium, and death in about four days.—The PRESIDENT mentioned a case of acute necrosis of the clavicle, which had died exactly as Mr. Baker had described.—Mr. HEATH explained, that he was quite familiar with such cases; his previous remark had reference to cases of multiple necrosis in which he had not met with distinct evidence of pyæmia.

Mr. MORRANT BAKER also showed the lower half of a Femur removed from a patient in St. Bartholomew's Hospital suffering from abscesses and sinuses in the lower end of the thigh, with severe pain and hectic. Amputation was performed. The femur was very much thickened, with new bone thrown out both around and within it, but the outline of the original shaft was still distinct. He thought it an example of the middle stage of osteitis. Referring to the common use of the term "expansion of bone," he remarked that there is no such thing as a marked separation of the lamellæ of compact bone, and that the condition so named was really due to a deposit of new bone from the periosteum and endosteum, with subsequent obliteration of the outline of the original bone. The condition of necrosis without suppuration, or intra-osseous necrosis, he held to be the outcome of a chronic osteitis, and not a sudden death of the bone. Previous to the amputation the man had had two attacks of hæmorrhage, and twelve hours after the operation he sank from continuous oozing of blood from the whole surface of the wound. He had seen other examples of this condition, which he thought was a traumatic hæmorrhagic diathesis; in several of the cases there was albuminoid disease.

Mr. NETTLESHIP brought forward a living specimen—a girl aged fourteen, of stunted growth, having distinct evidence of congenital syphilis. She was affected on the right side with partial anæsthesia of the parts supplied by the first and second divisions of the fifth nerve, complete paralysis of the sixth nerve, and partial of the third and fourth. There was also opacity of the cornea, old iritis, choroiditis, and probably retinitis; it was impossible to tell the exact condition of the optic nerve, but vision was fair. The right eye was apparently markedly smaller than the left, which might perhaps be connected with an obvious asymmetry of the bones. There was old keratitis and choroiditis on the left side, but no paralysis. He was unable to say whether the seat of the lesion was in the orbit or the cranium; there were no symptoms of disease in either.—The PRESIDENT stated that there had been many recent additions to our knowledge of brain and nerve disease in inherited syphilis. He himself had published two or three cases of ocular paralysis, but it was bilateral, giving evidence of a central origin; he had never met with a case where there was distinct evidence of pressure on the trunks of nerves.

Mr. SHATTOCK showed a specimen of Fracture of the Coracoid Process of the Scapula found in an elderly woman. The fracture extended obliquely back from between the attachments of the pectoralis minor and the conjoined biceps and coraco-brachialis muscles. The fragment was united by a broad bond, and was not displaced. There was no sign of injury to the shoulder-joint. It was not a case of ununited epiphysis, because the line of fracture was not that of the junction of epiphysis and diaphysis, nor did the fragment include the whole process. There was no history to the specimen.

The following specimens were shown by card:—1. Cartilage Tumours in the centre of the ends of the Bones of the Metacarpus and Fingers—a drawing. 2. Congenital Solid Tumour on the end of Toe of Infant, adherent to the bone—a drawing. 3. Congenital Tumour on the end of Finger of Infant, containing a cyst with cartilage—a drawing. 4. Congenital Fibro-cystic Nævoid, tumour of the cheek in a child—a drawing. All by the President.

The meeting then adjourned.

MEDICAL SOCIETY OF LONDON.

Recovery from Symptoms of Organic Brain Disease.

THE first ordinary meeting of the 108th session of this Society was held on the 18th instant, F. J. Gant, Esq., President, in the chair. In the course of his opening remarks the President reminded the Fellows of the projected meeting of the International Congress in London, and stated that no efforts would be spared to make that gathering an historical success.

Dr. HUGHLINGS JACKSON then read a paper on a Case of Recovery from Symptoms of Organic Brain Disease. The case was one of supposed hysteria, double optic neuritis with nearly complete blindness, severe headache, no vomiting, loss of smell; no deafness; reeling gait; absence of patellar-tendon reflex; doubtful lightning pains. Recovery under mercurial inunction, except of anosmia and absence of patellar-tendon reflex. The patient was a well-nourished woman, twenty-two years of age, admitted into the London Hospital on Dec. 22nd, 1879. Menstruation was regular;

there was no evidence of syphilis. In August, 1878, she was run over by a cart, her legs being injured above the ankles. In May, 1879, she went into service, and was quite well except for a "weakness in her legs." This "weakness" increased, and two days before admission she could not stand at all, and took to her bed. During the week before admission there was a weakness of the right arm, which would "go and come;" afterwards "pins and needles" in this limb, and then weakness of the left arm set in. Her sight began to fail two or three weeks before admission. *Symptoms of local gross organic disease:* (*a*) double intense optic neuritis (with mere perception of light); (*b*) intense headache, from the misery of which she was silent and very quiet. On her recovery it was ascertained that smell was entirely wanting. She averred that she used to smell well before her illness. Dr. Jackson was doubtful whether anosmia was in her case a localising symptom or not. It may have been owing to pressure, direct or indirect, on the olfactory bulb; or, what is quite hypothetical, to an olfactory neuritis. *Localising symptoms:* (*a*) absence of patellar-tendon reflex—an exceedingly important symptom, especially as her gait was abnormal, without paraplegia. The reflex was still absent when she left the hospital on March 25th. It may have been so long before she had the other symptoms, but of this nothing could be learnt. (*b*) Pains in limbs. At one spot a little above the left knee she had occasionally a dart of sharp pain, followed by a dull aching; it would come and go. She had no severe pain except in the head. It could not be averred that the pains were those characteristic of posterior sclerosis. (*c*) Reeling gait. This was noted carefully. When admitted she could scarcely walk at all, and not without help. Her gait then was not like that of locomotor ataxy. As she improved a little it could be better analysed. It was evidently a reel—a drunken-like walk. Apparently she had good power in her legs, and, using popular language, though inexact, there was "disorder" of coördination without "paralysis." (*d*) Other symptoms. There was some slight weakness of the left arm, with a slightly feeble grasp. These symptoms were very slightly marked. Some tenderness of the lower part of the spine was found. No very local tender spinal spot was revealed, either by the application of a hot or cold sponge, or by manipulation. There was no spinal curvature, no atrophy of any muscles, no defective sensation, and no vesical trouble of any kind. Progress: rapid recovery. Iodide of potassium was at first prescribed in doses of five grains three times a day; but on January 4th mercurial inunction was ordered in addition. The dose of the iodide was smaller than that usually given in such cases. Under this mixed treatment she rapidly improved. From what was practically blindness she became able to read on January 26th No. 1 of Snellen at six inches with her left eye, but with the right only No. 3. On the day of her leaving the hospital, March 23rd, she could read No. 1 very easily with her left, and with slight difficulty with her right eye. Practically her sight was quite good. She felt well, and except that the patellar-reflex was still absent, and that she could smell nothing, she was considered to be free from symptoms. Dr. Hughlings Jackson then considered the case from several points of view. He referred to cases of recovery from symptoms induced by tumour of the brain; cases in which after little illness there was post-mortem evidence of tumour. He discussed also the question of syphilis, pointing out that a syphilitic tumour sometimes gave rise to symptoms similar to those produced by glioma or other "foreign body." He did not think that the mere fact of his patient's recovery under anti-syphilitic treatment necessarily over-ruled the conclusion that the intra-cranial disease was syphilitic. He spoke of the importance of the routine use of the ophthalmoscope, both as sometimes negativing the diagnosis of hysteria, and also as leading to early treatment.—Dr. ALTHAUS said the great difficulties in diagnosis of brain disease could be traced to two classes of cases—viz., those in which coarse lesions, as hæmorrhage, softening, abscess, atrophy, and tumours were found after death, yet no symptoms had existed during life; and others in which the gravest symptoms, pointing to severe organic changes, were observed, and the patients recovered under treatment. He alluded to hemi-anæsthesia occurring from disease of the posterior part of the internal capsule, and the same affection as occurring in Charcot's hystero-epileptic women, in whom the disturbance was purely functional. He also related a case resembling in many points that described by Dr. Jackson, and in which he had made the diagnosis of tumour in the right cerebral hemisphere. In this case the administration of mercury and iodide of potassium led to recovery, although the patient had never shown any symptom of syphilis.—Dr. BROADBENT remarked upon the interest and value of the communication, the case affording Dr. Jackson an opportunity for the refinements in diagnosis which he had placed so clearly before the Society. He had, no doubt, seen many instances of recovery from far more serious symptoms of organic disease of the brain, as had Dr. Broadbent and others; and in this case the symptoms formed a distinct category, indicating the seat of the disease, and no one would doubt his diagnosis of a coarse lesion in or affecting the cerebellum. Dr. Broadbent thought the course of symptoms and rapid recovery were best explained by supposing the lesion to be syphilitic, and he cited a case of a young woman, recently under his care, suffering from headache, vomiting, convulsions, double optic neuritis, and paralysis of the left third nerve. She had certainly not acquired syphilis, but there was a scar on her forehead of a suppurating node (which had not healed until she took iodide of potassium), and no doubt she was the subject of hereditary syphilis. She rapidly recovered under large doses of the iodide; but about twelve months after was readmitted with paralysis of the right sixth and seventh nerves. He had also under treatment a case of hemiplegia in a young man, obviously due to inherited syphilis. The loss of patellar-tendon reflex was presumptive evidence of syphilis; for, as Dr. Gowers had recently stated, probably 75 per cent. of cases of locomotor ataxy were due to syphilis; and this case might be one of incipient ataxy. With regard to optic neuritis, he confirmed from many cases the fact so often insisted upon by Dr. Jackson, that this may exist without noticeable affection of sight; and in the present case he was inclined to attribute the blindness to pressure on the optic tracts or nuclei by the disease in the cerebellum. He held the view that optic "neuritis" was really ischæmia, due to strangulation of the nerve and its vessels just behind the eyeball, by effusion into its sheath; and he believed the neuritis, with numerous hæmorrhages (not, of course, the ordinary albuminuria retinitis) seen in some cases of renal disease, had the same causation.—Dr. DOWSE asked whether Dr. Jackson had met with the absence of patellar-tendon reflex when no actual posterior sclerosis existed; and said that in his opinion the phenomenon might be due to inhibition.—Dr. JACKSON replied in the negative.

MEDICAL OFFICERS OF HEALTH SOCIETY.

AT a meeting of this Society, on Wednesday, Oct. 13th, held at 1, Adam-street, Adelphi, the President, Dr. Bristowe, delivered the inaugural address of the session.

Referring to a promise made at the beginning of the last session, Dr. Bristowe said the subject of his address would be to discuss relations of medical officers of health to their duties. Dr. Bristowe said any intelligent layman would believe that if the mortality of a certain district was exceptionally high the sanitary authority of the district had neglected its duties. If it were shown to him that the deaths were due to diseases over which a sanitary board had no control, he would probably acquiesce under protest, and take his final stand on deaths from infectious diseases. It would not be easy to convince him he was in error, and if he were convinced he would say "I convict you of incompetence to deal with those matters of which sanitary science professes to take cognisance." Dr. Bristowe did not agree with this argument or conclusion, but considered that sanitary science had done much to diminish the prevalence of small-pox, cholera, and enteric fever.

The practice of vaccination has reduced the mortality from small-pox to a degree which it is almost impossible to appreciate, and these benefits are maintained even though weak-kneed politicians not only hesitate to make vaccination strictly compulsory, but actually seem to contemplate the granting (as Sir W. Jenner puts it) of licences to contract and propagate disease. We have power to enforce a single effectual vaccination, but even this may be evaded by any parent who chooses to pay a fine or undergo imprisonment. It is essential that the operation be repeated at the age of puberty. The only effectual remedy is to revaccinate all those who are exposed to contagion. If infantile vac-

cination and revaccination at early puberty were made absolutely compulsory, and if, when small-pox has broken out in a house, revaccination were made compulsory on the members of the household, epidemics of small-pox would never arise, or would be strangled in their birth.

The poison in enteric fever is contained mainly in the alvine discharges of patients. It is by the pollution of water and food that the disease is propagated. Improvements in our system of drainage have involved diminution of enteric fever in London. That enteric fever is the one disease in regard to which medical officers of health are directly serviceable is beyond dispute.

The prevention of cholera constitutes one of the greatest sanitary triumphs resulting from the almost complete abolition of superficial wells and the presence of a purer water supply.

We have no special proof that the contagion of diphtheria resides in the emanations from sewers.

Our powers of enforcing disinfection are interfered with by the apathy and antagonism of those whose duty it is to aid. In the great majority of cases no information, except in case of deaths, reaches us; doctors and the family prefer to hush the matter up.

Among other diseases which kill are inflammatory diseases of various kinds. The removal of dampness tends to improve the health of inmates, but the influence of damp rooms is little compared with that of daily exposure to cold and draughts on the doorsteps and in the gutter.

Mortality tables are invaluable guides to us in the performance of our duties; they yield important information upon the distribution of diseases and the time of their occurrence, but they must not be at once accepted as evidence of the influence of sanitary labours.

The relations of medical officers of health to the vestries or district boards which employ them is a matter of great importance. It is doubtful whether any advantage would be gained by making the appointments of medical officers of health permanent; if the salaries were not assured to them they could easily be got rid of by the diminution or discontinuance of the salaries, and it would be difficult to enforce the sanitary laws in the teeth of those who are placed in authority, nor in the metropolis has there been a case in which the vestries have exercised their powers arbitrarily or unjustly.

To a considerable extent medical practitioners look with suspicion upon health officers: it behoves the latter not to do anything to justify attitudes of this kind.

In conclusion, Dr. Bristowe pointed out that it is not the law which gives the medical officer of health the chief power for good, but the moral influence he acquires amongst those for whom, and with whom, he acts.

Reviews and Notices of Books.

On Atrophy of the Stomach and the Nervous Affections of the Digestive Organs. By SAMUEL FENWICK, M.D., F.R.C.P. Lond., Physician to the London Hospital. London: J. and A. Churchill. 1880.

PERHAPS more errors occur in the diagnosis of stomach affections than is the case with the diseases of any other organ. It is true that where "coarse" pathological changes have taken place, such as ulcer, cancer, or chronic gastric catarrh, there is generally little difficulty in arriving at a definite conclusion as to the nature of the lesion; but where the alterations of tissue are not so well marked, and where the mischief seems chiefly to arise from qualitative and quantitative changes in the composition of the gastric secretions, then it is we find a difference of opinion often expressed. In the present volume Dr. Fenwick presents us with a series of cases which will, we believe, serve as a useful guide to many who are called upon to decide upon the real nature of some of these "obscure" stomach affections. The chapters relating to atrophy of the stomach will be read with much interest, and Dr. Fenwick has already added considerably to our pathological knowledge in this direction. In the cases cited by him the atrophy was undoubtedly a morbid condition, manifesting itself primarily in the walls of the stomach, and not accompanying or induced by any other disease. In all, the symptoms were remarkably similar, as was the morbid condition of the stomach discovered after death. The patients were all males varying from forty-five to sixty-two years of age, a time of life in which the vital powers begin to fail, and when degeneration of tissue is most likely to take place. Marked anæmia was noticed from the first; microscopic examination of the blood, however, showed no increase in the number of the white corpuscles, and no abnormal appearance could be detected in the coloured cells. Dr. Fenwick also discusses the relation of gastric atrophy to other forms of "idiopathic anæmia," and throws out a hint that some explanation may be found for the anæmia in Addison's disease as the result of changes in the gastro-intestinal canal. These changes, Dr. Fenwick believes, are of the nature of chronic gastro-intestinal catarrh; the attacks of vomiting, one of the earliest symptoms of the disease, the want of appetite, the cardalgia, and the diarrhœa which is usually such a prominent symptom, point conclusively to the presence of this condition. Admitting, therefore, that chronic gastro-intestinal catarrh is invariably present in Addison's disease, it becomes necessary to inquire how it is to be accounted for. Dr. Fenwick believes it to arise from interference with the function of the nerves supplying the gastro-intestinal tract, caused by disease of the supra-renal capsules. For if, as he observes, section of a sympathetic nerve causes the dilatation of the vessels of the part to which it is distributed, we can see that the morbid state of the nerves and ganglia of the stomach and intestines will be apt, if our present physiological doctrines be correct, to give rise to permanent catarrh of these structures. The other phenomena of the disease, Dr. Fenwick remarks, seem to lend support to this view, especially the failure of the heart; and he arrives at the conclusion, which has also been entertained by others, "that death in Addison's disease is not the result of an interference with the functions of the supra-renal bodies, but that it arises from the destruction of the numerous and important nerves that are situated in their vicinity." Dr. Fenwick's remarks upon atrophy of the stomach in persons affected with cancer of various organs will be read with interest and profit. In the consideration of the nervous affections of the digestive organs the author approaches debateable ground. He cites some very interesting cases of "anorexia nervosa," a disease first described by Sir W. Gull under the term "apepsia hysterica," and subsequently by Dr. Wilks. No pathological explanation has hitherto been forthcoming to account for the strange inappetency. Dr. Fenwick, however, very plausibly suggests that it may be due to either "anæsthesia or a perversion of the sensibility of the nerves distributed to the stomach, analogous to what we sometimes observe with respect to the cutaneous nerves in hysterical females." Idiopathic neuralgia of the stomach and abdominal viscera is an affection on the existence of which some physicians have expressed doubts, holding that frequently recurring pain, localised to one particular spot, is generally found to be the result of actual disease. This view, however, cannot be accepted by those who have had experience of malarious diseases; intense neuralgic pain, accompanied by rigors and followed by sweating, and yielding to treatment with quinine and arsenic, is not infrequent in persons living or who have lived in malarious districts. Many of Dr. Fenwick's cases were of this nature. The concluding chapter treats of the gastric neuroses of the vaso-motor system; two out of the three cases given in illustration seem to us in their character closely to resemble the *crises gastriques* which often precede or accompany the development of ataxic symptoms.

In conclusion we congratulate Dr. Fenwick on the production of a work which, while interesting to the pathologist, is of greater value to the practitioner as presenting him with a clinical account of some of those obscure affections of the stomach which are constantly coming under his notice.

An Atlas of Human Anatomy. By RICKMAN JOHN GODLEE, M.S., F.R.C.S., Assistant Surgeon to University College Hospital, and Senior Demonstrator of Anatomy in University College. London: J. and A. Churchill. 1880.

WE have already noticed the earlier numbers of this excellent atlas, but we must congratulate Mr. Godlee on its completion, and on the improvements in the later plates. Some of the earlier drawings were scarcely as distinct as we could have wished, but in the more recent ones no trace of imperfection exists; and for accuracy, clearness, and intelligibility they leave nothing to be desired. The series, which consists of twelve parts containing forty-eight plates, will form a most excellent guide to the student whilst dissecting, and its study will do much to bring back to the advanced practitioner anatomical details which may have escaped his memory. He will thus be materially aided in planning the steps of an operation or in arriving at the diagnosis of a difficult case. The parts are all represented half the natural size, and although some would appear less complicated if somewhat larger, we must allow that this uniformity has in other respects great advantages. The explanatory text is concise, well written, and contains many valuable suggestions for the surgeon. Mr. Godlee's labour of four years has been well bestowed, and editor and publishers deserve great credit for having added so useful a work to English anatomical literature.

Anatomy, Descriptive and Surgical. By HENRY GRAY, F.R.S. Ninth Edition, by T. HOLMES, M.A. Cantab., Surgeon to St. George's Hospital, &c. London: Longmans, Green, & Co. 1880.

GRAY'S Anatomy is so deservedly popular and well known that it is unnecessary for us to do more than call attention to the issue of this new edition. It differs but little from the preceding, except in some corrections in points of detail and in containing some illustrations from Klein's Atlas of Histology. The artistic finish of the illustrations in the early editions was so prominent a feature that we are sorry to see badly-executed drawings—such as Nos. 370, 394, and 438—perpetuated in the later editions. We would suggest that these should be replaced in the next issue by figures which a little extra care in the drawing and shading would make much more intelligible to the student, and more worthy of a place in Gray's Anatomy.

Spirit Gravities, with Tables. By THOMAS STEVENSON, M.D. Lond., Fellow and Examiner in Chemistry of the Royal College of Physicians of London; Examiner in Forensic Medicine in the University of London; Lecturer on Chemistry and on Medical Jurisprudence in the Medical School of Guy's Hospital, &c. London: Van Voorst. 1880.

THESE tables are similar to those of Mr. Hehner which we lately noticed. Mr. Hehner, however, based his on the determinations of Fownes, whereas Dr. Stevenson adopts the older experiments of Gilpin, confirmed in part by Drinkwater. Dr. Stevenson adduces reasons which appear to us satisfactory for his choice, and draws attention to one or two points of ambiguity in Fownes's otherwise excellent experiments. The two sets of tables differ by little, the highest variation, and that an exceptional one, being about 5 per cent. of proof spirit. Gilpin's work is known to have been admirably executed. It is, indeed, really marvellous when we consider that it was done nearly ninety years ago.

ABERDEEN UNIVERSITY COURT.—At a meeting held on the 12th inst., the following gentlemen were appointed examiners for graduation in medicine for the forthcoming year:—Dr. W. J. Walsham, London; Dr. Robert Smith, London; Dr. F. Buchanan White, Perth; Dr. J. W. Miller, Dundee; Dr. David Greig, Dundee; and Dr. John Barclay, Banff.

The Lancet Commission
ON THE
MEDICAL USE OF WINES.

IV.—RED BURGUNDY WINES.

THE numerous red wines from the Cote d'Or, although not so widely known or so much consumed in this country as the clarets from the Gironde, are great favourites with connoisseurs, and secure a large, though perhaps a somewhat more select sale. By many authorities the Cote d'Or is thought to be even more favourably circumstanced for the cultivation of the grape than the claret district; its soil is remarkable for the large quantity of iron with which the carbonate of lime is pervaded, and some consider this of exceptional importance in developing the perfect characteristics of the grape. Burgundy wines are deeper in colour, more full-bodied and generous, and possess a more typically vinous, if somewhat less delicate, flavour and bouquet than other red wines of similar quality and price. As a rule, they suffer from the disadvantage of not preserving their best qualities beyond a certain age, for after ten or twelve years keeping many of them become somewhat thin, although Santenay and Corton wines are exceptional in this respect, and retain their especial characteristics for a much longer period. Hence, although the best vintages of late years are probably those of 1865 and 1868, yet wines of 1870 are now in excellent condition; and those of 1874–75–76 are very fair samples, and will still further improve. Almost every village in the Cote d'Or gives its name to a wine, but for practical purposes, medically, they can best be taken in three classes. The cheap Burgundies are either the ordinary red Burgundies, such as inferior growths of Mercurey and Beaune, or very new specimens of some of the higher-classed wines. The better Beaunes, and the wines of Nuits, Volnay, and Pommard, form a second group. Corton may be taken as a link between this division and the highest, although very fine specimens of Volnay make the latter a dangerous competitor for pride of place. The superior Burgundies include some of the grandest wines that are known, such as Romanée, La Tâche, Richebourg, and Musigny, in addition to the better known Chambertin and Clos-de-Vougeot. From the adjacent districts of Mâcon and Beaujolais a large quantity of wine is now imported, and as these are popularly, though erroneously, classed with the true Burgundies, it will be most convenient for us to discuss their medicinal value at the same time. Whilst a few of them are really first-class wines, the majority are cheap and more suited for ordinary use, and hence come into competition with the cheaper clarets and Burgundies than with the more select varieties of these wines. Besides ordinary Mâcon, Moulin-à-Vent and Thorin wines are the best known of that group; from the Beaujolais districts those from the vineyards of Chénos, Fleuri, and Morgon are almost the only ones known by distinctive names in this country. The wines of Mâcon and Beaujolais are derived mainly from a different kind of grape from that which is most cultivated in the Cote d'Or; they are paler in colour, less spirituous, possess less body, and are more astringent than the true Burgundies. They are usually considered to occupy an intermediate position between the clarets in ordinary consumption and the less expensive of the red Burgundies, &c.

Typical examples of Mâcon [submitted by C. Ward and Son] and of Beaujolais [Gallais], both of 1875 vintage, and at 24*s.* per dozen, were analysed. The former, though a full-bodied wine, was remarkably soft and delicate to the palate, whilst the latter was very astringent, although a very sound wine, and without any trace of acidity.

(M.)

		Mâcon In 100 vols.		Beaujolais In 100 vols.
Total solids		2·02	.....	2·09
Grape-sugar		·08	.....	·07
Fixed acid		·38	.....	·38
Volatile acid		·22	.....	·22
Tannin		·12	.....	·20
Absolute alcohol	by weight ...	9·00	.....	9·57
	by volume ...	11·17	.....	11·87

The Beaujolais showed a very marked proportion of tannin, but this was less than in some of the clarets we analysed. The amount of grape-sugar and of fixed acid was not excessive, and the percentage of alcohol very little more than that which is generally found in clarets. The more generous character of these wines will recommend them to many, and there is no reason why they might not be drunk in all cases in which we have recommended red clarets. Beaujolais is of course preferable when a wine of marked astringency is indicated.

For purposes of comparison we selected a true Burgundy wine, rather new, but sound in quality, and with a full vinous flavour [submitted by James Campbell], and marked 18*s.* per dozen.

(N.)	In 100 vols.
Total solids...	1·73
Grape-sugar	·08
Fixed acid	·31
Volatile acid	·27
Tannin	·13
Absolute alcohol { by weight	9·64
Absolute alcohol { by volume	11·96

The amount of total solids is very small, as in some of the clarets, whilst the percentage of alcohol is rather larger than in the Mâcon, and almost the same as in the Beaujolais. The tannin is very small, and in other respects no well-marked difference could be detected.

Higher-priced Burgundies—viz., Beaunes, Pommards, and Volnays, vary from about 30*s.* to 50*s.* per dozen, and many excellent specimens were submitted by various merchants [Fearon, Feltoe, Ward, &c.]. They were typical, full-bodied, high-flavoured wines. Any of them might be taken with advantage in suitable cases, and it is especially from this class that conclusions on the medical use of red Burgundy should be drawn. Medicinally they have little to differentiate them from one another, although age, bouquet, and flavour will have much influence in determining a personal choice. An analysis of a very good Beaune [Ward] of 1875 vintage at 34*s.* per dozen gave the following results:—

(O.)	In 100 vols.
Total solids...	1·78
Grape-sugar	·07
Fixed acid	·33
Volatile acid	·22
Tannin	·19
Absolute alcohol { by weight	9·57
Absolute alcohol { by volume	11·87

As superior examples we should also include two specimens of Corton, remarkable for delicacy and softness—one of 1874 vintage [Burgoyne], at 48*s.* per dozen, and another more expensive of 1870 vintage [Ward].

The highest priced first-class Burgundies range from 80*s.* to 120*s.* per dozen, and these, of course, include the finest wines of France. Their expense almost precludes their being prescribed medicinally; but as they may exceptionally be of importance, we analysed two varieties. They were both wines of superior merit, and in every respect worthy of especial praise. One was a Chambertin of 1870 vintage, at 78*s.* per dozen, grown by Groffier, of Vôsne-Romanée [submitted by Campbell], and the other was a Romanée of the same vintage, at 84*s.* [Fearon & Sons].

(P.)	Chambertin. In 100 vols.	Romanée. In 100 vols.
Total solids	1·86 ...	1·49
Grape-sugar	·01 ...	·01
Fixed acid	·37 ...	·33
Volatile acid	·30 ...	·20
Tannin	·11 ...	·12
Absolute alcohol { by weight ...	11·15 ...	11·00
Absolute alcohol { by volume ...	13·81 ...	13·62

The chemical characteristics of these grand wines are, the increased percentage of alcohol, the almost complete absence of sugar, and the low proportion of tannin. For diabetic patients who can afford so expensive a luxury, these high-class red Burgundies appear to be especially well fitted.

The therapeutic value of red Burgundy wines is very marked, but the potency of their effects must make physicians somewhat cautious in recommending them, although in many types of disease no class of wine will produce so great benefit. They are well fitted for convalescents from fevers and other acute affections, and are superior to all other wines in cases of anæmia, general debility, feeble development, and cases of mal-nutrition not depending on gastric or intestinal irritation. Even if such be present, they may frequently be prescribed with benefit, although lighter, and especially sparkling wines agree better if the irritability be a marked symptom. In most cases in which iron and cod-liver oil form the routine treatment, a wine-glass or two of good Burgundy with dinner is an excellent adjuvant. Primarily somewhat stimulating, these wines in their after-effects are markedly sedative, and hence many patients, weak in physical powers, but excitable and highly nervous in temperament, derive more good from them than from other classes of wines. In some cases this sedative influence may render unnecessary the ordinary soporifics, and chloral, opium, and bromides be now and again dispensed with. They do not aid the digestion as clarets often do, nor can they be taken as refrigerants; in fact, Burgundy is a very powerful wine, must be ordered with great care, and taken in small quantities only. It is said to favour the development of obesity, but we much doubt if this be a fact when the wine is taken in medicinal quantities. The excessive eating with which Burgundy-drinking is so generally accompanied, has, perhaps, as much to answer for in the production of this condition as the mere consumption of the wine. It is stated that in the Burgundy districts gout is not a prevalent disease, even among the growers and exporters of the best wines; but gouty patients can only take it sparingly, if indeed it be ever advisable. Bilious and plethoric people cannot take this class of wine with safety, and in many of these patients headache and a sense of fulness and discomfort are induced by even small quantities. The amount of sugar is so small that it may be safely ordered for diabetics, and the superiority of the best wines in this respect has already been referred to. The amount of fixed acid is much the same as in clarets; this, with the lower percentage of grape-sugar, make it even more valuable in many cases of rheumatism and neuralgia. It is important to remember that the best red Burgundies contain more alcohol than the corresponding clarets; and that in even the cheaper varieties, including Mâcon and Beaujolais, a similar difference exists. White Burgundies of the highest class, such as Montrachet, contain even more alcohol than Romanée or Chambertin, and as a large amount of unfermented grape-sugar is also usually present in such wines, they are indicated in different cases of disease, and cannot be safely substituted for one another.

NEW ENTRIES AT THE MEDICAL SCHOOLS.

THE following are the returns of the new entries at the medical schools of London and the provinces. When not otherwise specified, the number given must be understood to include all kinds of entries. St. Bartholomew's, as usual, heads the list, with a total of 170 new students, 20 of whom have entered to hospital practice or to special courses of lectures. Next comes the London Hospital, with 137, of whom 53 are special. Then follow University College, with 101 (in addition to 50 students preparing for Preliminary Scientific M.B. Examination of London University); Guy's, with 101 (11 special); St. Thomas's, with 91, of whom 55 are first-year's men; King's College, 69 (60 first-year, 9 second-year); St. George's, 61 (44 first-year); Middlesex, 50 (33 full curriculum); Charing-cross, 45; Westminster, 23 (3 partial). Of the Provincial Schools, the Cambridge school counts 57 students actually dissecting, 30 of these for the first time; the University of Durham College of Medicine numbers 54 new entries—29 full, 25 partial; Leeds has 41 (1 dental); Bristol 26 (4 partial); Queen's College, Birmingham, 22.

KING'S COLLEGE MEDICAL DEPARTMENT, ENTRANCE SCHOLARSHIPS.—Mr. John Power, Mr. Gray, and Mr. Thomas Arthur Collinson have been each awarded a Warneford Scholarship of the value of £75; and Mr. Charles Robert Hodges, one of £50. Mr. Ernest Pane Alphonse Mariette has obtained a Sambrooke exhibition of £60 for proficiency in General Literature and Science; and Mr. Albert Carters a Clothworkers' exhibition in Science of the value of £50.

THE LANCET.

LONDON: SATURDAY, OCTOBER 23, 1880.

"WITH a cause which in itself was unassailable, the medical staff have thrown away their advantages by injudicious letter-writing; and they have now no choice but to accept, for a time, the false position in which they have placed themselves." This is how *The Times*, which may be regarded as an exponent of the calm judgment of the community on the main question at issue, views the situation at Guy's Hospital; and the following is the opinion formed by the same impartial authority as to what the situation described practically involves. "According to the position they have taken up, they must submit to the risk of seeing injurious rules enforced, of seeing patients maltreated, of seeing the treasurer and the matron deciding, ignorantly and therefore often wrongly, on purely medical questions." It would be difficult to indicate a state of matters more unsatisfactory or humiliating, and, we fear, the utterly disastrous nature of the position apparently accepted by the medical staff of this hospital is not exaggerated in this outlook.

We are not in the confidence of the medical staff of Guy's Hospital, for the obvious reason that whatever other excellent qualities they may possess they have no confidence in themselves, probably because they have no confidence in each other. If the little band at Rorke's Drift had not held together, but each gallant member of the shattered corps had elected to fight the battle his own way, from his own personal coign of vantage, and with a special eye to his own safety, the result would not have been either creditable or satisfactory. This is what the physicians and surgeons attached to Guy's Hospital have been doing, and the result of the policy adopted is precisely what everyone who knew what was going on must have anticipated. We had in our possession on Wednesday last information which rendered the course taken by the Governors at their meeting of Thursday inevitable. The staff had hauled down its flag on the matter of principle by withdrawing a letter which, if not altogether wisely worded, was in fact and spirit a simple and manly statement of the facts, and the Governors had determined among themselves to make the most of a submission instigated, as they assumed, by a selfish fear of the consequences, from a body of professional men who had rashly taken up a position of defiance they were not prepared to defend. The medical staff of Guy's Hospital is composed of men for whom individually we, in common with the whole profession, have the highest respect, but as a body entrusted with the guardianship of public and professional interests, and accidentally placed in a position wherein they stood charged with the matured judgment of the medical profession on a question affecting the interests of the sick poor, at a great crisis in the history of hospital management, they have conspicuously failed. We will not say that they have betrayed their trust, but it has slipped from feeble hands palsied by the fear of the tempest their own rashness and want of tact had raised.

What remains to be done in the emergency? Is the medical staff of Guy's, as a body, content to carry on the medical business of this institution while the Governors, according to the express terms of their resolution, "maintain in its integrity the power to govern the hospital entrusted to them by law." It is *practically* a condition of the withdrawal of the resolution which "required" the senior physician and the senior surgeon to resign, that the subsequent resolution, by which the Governors virtually declare their intention to persist in the system of management of which the staff complained, "must be accepted by the medical staff." The withdrawal of the demand for resignation was an act of grace following upon the "unreserved" submission of the vanquished. Under these circumstances, we wait to see what course the staff as a whole, and Dr. HABERSHON and Mr. COOPER FORSTER individually, will elect to pursue. If, as we hinted last week, it had been a condition of the new start in this painful business that the Governors should acknowledge their error in attempting to manage a medical institution without medical aid, it might have been expedient to try the experiment of life and work under the existing *régime*; but no such acknowledgment has been made. On the contrary, the Governors have formally declared their determination to "maintain" their position. The only change in the situation is that the medical staff has abandoned the ground which it had taken up.

This is a true statement of the facts. It is idle to pretend that any new light has been thrown on the nature of the overtures made to the Governors when they consented to admit two members of the staff to the Taking-in Committee. All that is now *known* as to the status to be accorded to the representatives of the medical faculty at this subordinate board was known, or might have been known, months ago, when the original proposition was discussed; and, when taking a moderate view of the then situation, we counselled the staff to accept the proposals made to them. Subsequent events have shown that the relations between the medical staff and the Governors were, even at that time, so strained that a mutual understanding was impracticable. In short, the medical faculty at Guy's has allowed itself to be fretted and cajoled into a position wholly incompatible with self-respect, and the sooner and the more boldly it cuts itself adrift from a false and unsafe mooring the better will it be for its own reputation, and the credit of the profession to which its members belong. The policy and action of this body, as such, are unworthy of the distinguished reputations of its members as individual physicians and surgeons. It seems to have been embarrassed and misled by want of confidence in itself and in the profession. The interests of the sick poor, which are directly involved in this controversy, ought to have been paramount. The fate of the hospital, of the school, and of the physicians and surgeons attached to the hospital and the school, respectively, should have been left out of the question of policy. All responsibility as to the institution and the pupils would have devolved on the Governors if the medical staff had simply and boldly pursued the path of duty. If the Governors had closed the hospital, and broken *their* business contract with the pupils, the issue raised would doubtless have been adjusted. In any event, these were questions for the Governors, not for the staff.

The medical profession does *not* counsel the medical staff

of Guy's Hospital to carry its policy of submission farther. Public opinion will *not* justify the surrender of the interests of the sick poor. The principle which demands medical control for a medical charity is one which cannot be asserted and waived at will. The practical proposition that *nursing* is an integral part of treatment, to be performed under medical direction, and not to be regarded as a specialty entrusted to a separate department, is too obvious to be gainsaid or lightly set aside. In brief, the issues at stake are too great and too grave to be trifled with. If the medical staff at Guy's Hospital would retain the respect of the profession and the pubic as a representative body of medical men, it must pause before it decides to accept a compromise which is not merely humiliating, but cripples while it degrades.

WE are glad to learn on the best authority, that of the Vestry Clerk of St. Pancras, that the reports, published in several of our leading daily contemporaries, of a recent meeting of the Sanitary Committee of that parish, were entirely fallacious in attributing to Mr. SHIRLEY MURPHY, the local medical officer of health, a statement that the London registrars were in the habit of registering deaths without medical certificates in a wholesale manner. It appears that in fact Mr. SHIRLEY MURPHY only made a representation to his sanitary authority, deploring, as we have done again and again, the imperfect and dangerous condition of registration law, which permits the registration of any deaths without the production of a medical certificate, or other satisfactory evidence of the true cause of death. Reforms of all kind are too frequently retarded, instead of promoted, by exaggerated statements of the evils to be redressed, and on this account alone we regretted the over-statements which were last week falsely attributed to Mr. SHIRLEY MURPHY with regard to the registration of uncertified deaths in London. We rejoice to see that he, as well as one or two of the medical officers of health of Wandsworth District, has formally brought this important matter before the local sanitary authority; and we trust that every other medical officer of health will do his utmost to impress upon his sanitary authorities this dangerous flaw and laxity of registration law, as a preliminary step to pressing upon the Government, through the Home Secretary or the President of the Local Government Board, the necessity for further legislation which shall secure the due certification of all causes of death previous to registration. It is eminently desirable, however, that with a view to bringing the matter before the Government, by deputation or otherwise, some agreement should be arrived at as to what remedy ought to be proposed for the present dangerous and unsatisfactory state of the law. It should in the first place be clearly understood that nothing short of new legislation can effect the desired reform, as the Registrar-General and his local registrars are powerless, under the present state of the law, either to obtain medical certificates concerning a certain proportion of the deaths that occur, or to refuse to register such deaths because no such certificates are forthcoming. Neither has the Registrar-General any authority to secure the holding of inquests in cases where no satisfactory evidence of the cause of death can be obtained. The only means under the present state of the law to obtain evidence of the cause of an uncertified death is the holding of an inquest, but it is very rare for a coroner to hold an inquest with this object. We have good reason for believing that most of the best registrars would gladly be spared their present unpleasant responsibility in the matter of uncertified deaths; they are instructed to refer all cases of death from violence, as well as all cases attended by suspicious circumstances, to the coroner before registering the death. It is, however, impossible in very many cases for the registrar to know whether there are any "suspicious circumstances" connected with an uncertified death he may be called upon to register. Coroners, moreover, seldom give a certificate concerning a case brought under their notice, in which they consider an inquest unnecessary, which would alone afford satisfactory evidence that the registrar had acted in accordance with his instructions. Registration in London is more efficiently carried out, as regards the certification of causes of death, than in the provinces, on account of the small proportion of unqualified medical practice in the metropolis. In devising a system for the certification of those deaths which now remain uncertified, it should therefore be remembered that in Wales and in some parts of England the proportion of uncertified deaths, instead of being less than 1 per cent., as it was in London last quarter, is 12 per cent. and upwards. It is evident that the expensive formality of an inquest cannot be necessary in so large a proportion of cases, and yet it is as certain that the present system is fraught with the gravest dangers. It will be wise to urge upon the Government when the coroners question is dealt with, as it must be ere long, that the questions of uncertified deaths and of apparently unnecessary inquests should be fully considered in their relative bearing on each other.

ACCORDING to modern theories, diabetes is supposed to depend, to a large extent, perhaps entirely, upon derangement of the vaso-motor mechanism of the liver. This point in the pathology of the disease has been the subject of a recent series of investigations by M. LAFFONT, which have been published in the *Gazette Médicale de Paris*. CLAUDE BERNARD, as is well known, showed that division of the cord between the seventh cervical and first dorsal vertebræ arrested the effects of the "diabetic puncture" of the floor of the fourth ventricle, and hence concluded that the path of the nervous influence was by the splanchnic branches of the sympathetic, and that the glycosuria is the result of an irritation, not of a paralysis, of the nerves, since the latter would not be removed by a second division of the path. M. LAFFONT has endeavoured to ascertain the truth of this opinion, by stimulating the first dorsal pair of nerves by faradisation, and observing the effect of this stimulation on the vessels of the liver. In the first series of experiments he opened the spinal canal, and divided the cord at two spots, isolating a segment corresponding to the first and second dorsal pairs. He next exposed the liver, and observed changes in its vascularity by the naked eye. The observations were made upon dogs. On irritation of the isolated segment of the cord, the liver was observed to present disseminated congestion, accompanied by a corresponding injection of the intestine, and turgidity of the spleen. The view that the morbid influence is irritative rather than paralytic is thus confirmed.

BERNARD also found that the stimulation of the central

extremities of the vagus increased the amount of sugar produced; while BEZOLD ascertained that similar stimulation caused, in curarised animals, a fall in intra-arterial pressure, which, LUDWIG and THIRY showed, was due to dilatation chiefly of the abdominal vessels. VULPIAN attributed this effect to the simultaneous stimulation of the central extremity of the depressor branch of the vagus. M. LAFFONT has endeavoured to ascertain whether this latter view is correct, and he found that intermitting stimulation for an hour of the central extremities of the depressor nerves, by means of a weak faradaic current, produced actual glycosuria, the sugar amounting to from twenty-five to forty-nine grammes per litre of urine. This fact had, indeed, been already ascertained by FILEHNE, who stated further that the faradisation of the central extremities of the pneumogastrics themselves in the rabbit does not cause glycosuria. The latter fact is not corroborated by LAFFONT. He was able by such stimulation to cause a glycosuria amounting to from eight to seventeen grammes of glucose per litre, and believes that it is due to the asphyxia produced by this stimulation.

In another series of experiments it was found that painful stimulation of any mixed nerve, frequently repeated, caused glycosuria at the end of a certain time, amounting, in different animals, to from four to nine grammes of sugar per litre. Next, the effect of division of the first two or three pairs of dorsal nerves on the glycosuria resulting from puncture of the floor of the fourth ventricle was investigated in rabbits. Threads were placed around the roots of the first two dorsal pairs, and, the effect of the diabetic puncture having been ascertained, the nerves were torn through by means of the thread. The effect was that the sugar fell from twenty and forty grammes per litre to seven or twelve grammes. The effect of this operation on the vascular phenomena caused by stimulating the central portions of the pneumogastric or depressor nerves was then examined. It was ascertained by means of a cannula introduced into the carotid or crural artery. In the dog, the stimulation of the central extremities of the pneumogastrics with a strong current caused always an enormous increase of pressure, while feeble stimulation produced, on the other hand, a considerable diminution of pressure. The roots of the first three or four dorsal nerves were then torn through, and after this the feeble stimulation, which had before caused a fall in the blood-pressure, produced a considerable rise. The result was the same in the rabbit, with the exception that a strong stimulation of the depressor nerves never caused an increase in the blood-pressure. Thus the separation of the dorsal nerves prevents the effect upon the circulation otherwise caused by the stimulation of the pneumogastric or depressor nerves.

What is the effect on the abdominal circulation of stimulating the peripheral extremities of the upper dorsal nerve roots? Since all the roots could not be simultaneously excited, the first pair only was stimulated, the animal being under the influence of curara. A fall in the blood-pressure resulted, not considerable in degree, because under the influence of curara there is already dilatation of the abdominal vessels. The pressure was estimated in the splenic artery, or in one of the branches of the mesenteric artery. It was thus ascertained that the stimulation of these nerve roots by a weak faradaic current caused always a fall in the arterial pressure in the abdominal organs if the root is carefully isolated. The least extension of the current to the spinal cord itself caused an increase of pressure.

The conclusions drawn from these experiments confirm the view that the glycosuria which results from the stimulation of the central extremities of the pneumogastric nerves in the dog, the depressor nerves in the rabbit, and the sensory nerves generally, is the result of an impression conveyed to the bulbar vaso-dilator centre, the path from which is by the cervical cord, the first dorsal nerve roots, and the sympathetic and splanchnic nerves. It is conjectured to be by an action upon this centre that certain cardiac and general diseases may cause glycosuria. These effects, and those of the diabetic puncture, are prevented by the separation of the upper dorsal nerve roots, while the effect of stimulation of these divided roots shows that they contain dilator nerves for the vessels of the abdominal viscera.

WE have lately inserted several letters on the question of cheap methods of doctoring. We have not been able to give a place to all the letters; but those who defend low charges for professional services cannot complain that their side of the question has not had a fair hearing. We were the more anxious to give this, as the profession of late has been much scandalised at the bold way in which advice and medicines have been offered to the public, as if they were very cheap and valueless wares indeed. Those who are much condemned ought to have an opportunity of defence. Moreover, we confess to feeling that the problem of giving medical service to the poor on proper terms is one that is full of interest. The poor must have a doctor. They can do without lawyers, and perhaps even without clergy, but the great human art of medicine is in constant demand by all sorts and conditions of men. None of the experience yet collected is conclusive or satisfactory. The old gratuitous system has, to say the least, been abused; the club system applies chiefly to *men* the least exigent section of the community in a medical respect; the provident dispensary system is too systematic for large sections of the community, and even where it is adopted is exacting and not very profitable to medical men. We, therefore, are not disposed to dismiss with a hasty and contemptuous condemnation those who try to bring multitudes of people under legitimate medical treatment who would otherwise go to the chemist, or remain untreated, or run up medical bills without the power or the intention of paying them.

Our readers will judge for themselves how far such practitioners have made good their defence. Their letters are very interesting, very ingenious, and show considerable experience, and no little medical ability. They are evidently written by principals, who if they themselves could see patients in reasonable numbers, at reasonable charges, would be doing great service to the community. But a close inspection of their letters, and of such letters as that of "M.D.," will show that there are many gaps in their case, and many statements which would require very severe criticism before they could be accepted, and many others which tell against the system which they are adduced to support. Our correspondent, "L.R.C.P. Edin.," for ex-

ample, states that the shilling a week system does not injure other practitioners; and that the drug bill of a dispensary paying £300 a year does not exceed £70. This estimate is confirmed by "M.D. Lond.," who tells us that he sees sometimes over two hundred patients a day. This gentleman discusses the question—How is it that these cheap private dispensaries are often disreputably conducted? His answer to this is the difficulty of finding suitable men, which he defines as men of business capacity, honesty, punctuality, a little capital, and fond of work—such men, in fact, as make the assistant-physicians of out-patient departments of hospitals, *plus* considerable administrative talent into the bargain. To expect all this in one man, and to make the system depend on such a rare combination in one man, is to pronounce its failure and impracticability. We will not too closely criticise the fine estimates of the cost of drugs, though we do not think so lightly of the cost of providing and dispensing drugs in a proper and palatable form. Some of our correspondents do not hide their contempt of medicines. We do not share that feeling. Rich people have many ways of getting well, and restoring their strength. The poor are particularly dependent on good, sound, suitable medicines and advice, tendered by a man of good judgment. Can this be done by the ablest and strongest man if he has to see two hundred a day—or even one hundred a day? We think not. The work must be scamped. It is a very different thing from the case of the out-patient department. There the physician has students and clinical clerks and assistants at his elbow, to each of whom he can assign various duties; but even he is often jaded by seeing half the number twice a week.

What is likely to happen when such crowds throng the cheap dispensary, but that the principal will employ assistants—probably unqualified, as in the damaging case quoted by "M. D."—who may have both to see patients and dispense medicines—with what leisure, or care, or ability, we must leave our readers to imagine.

Finally, the gentlemen who have so ably defended charges that seem to us calculated to bring physician and medicine into contempt, have conspicuously avoided one feature of their system—the entire absence of any pretence of selecting cases or persons. To open doors at a given hour to see all and sundry persons for a shilling a week, is virtually to invite the patients of other medical men, and to offer an inducement to the mean and the thoughtless to get that for sixpence which they should pay five sixpences or five shillings for. It is therefore a direct way of underselling medical brethren. The system has its advantages. It procures ready money, and to judge from some ostentatious facts, a good deal of it. It shortens the undoubtedly trying period of a medical man's life, that in which he has to wait. But it does not hold high the principles by which physicians in all ages have commanded the respect of the public and of each other.

DR. GEORGE KING, superintendent of the Calcutta Botanical Gardens, has, we understand, been chosen by the Indian Government to discharge the duty of selecting a site on the Andaman islands for the experimental cultivation of the chinchona. Meanwhile the trees planted in Bengal are said to be paying handsomely, some 400,000 lb. of bark having been harvested.

Annotations.

"Ne quid nimis."

FOGS.

THE attention which is being directed to the subject of our London atmosphere will, it is to be hoped, bear some fruit, for there can be no doubt that the question is one of great importance, and that the present condition of the air we breathe is nothing short of a grave national calamity, and one which calls for the active interference of the Legislature. In a city, situated as London is, on the estuary of a great river, fogs must be expected, and all that we can hope to do is to prevent the foggy atmosphere from being fouled by smoke, and thus to reduce the evils and inconveniences to a minimum.

We will briefly epitomise the evils of our dirty London air. As regards health these evils are *acute* and *chronic*. The acute evils are shown by the returns of the Registrar-General. Last winter the death-rate was more than doubled chiefly by the increase of mortality from pulmonary disease. In 1873 the same alarming mortality occurred; and the smoke proved fatal also to a large number of the beasts exhibited at the Smithfield Show, no less than ninety-two of them having to be removed from the Agricultural Hall to be slaughtered at once, or "recovered," if possible, in the country. We need say nothing of "fog casualties," which are also to be reckoned among the acute evils, and serve to swell the death-rate.

The chronic evils attendant upon our atmosphere are, we believe, more serious, though attracting less attention, than the acute evils. The chief of these is the almost complete absence of sunlight for a great part of the winter. That sunlight is absolutely necessary for the proper development of both plants and animals, is a fact so generally accepted as to need no arguments from us. To what extent anæmia, rickets, and the general feebleness of the children of the London poor are attributable to want of light we cannot accurately determine, but that it plays an important part in the causation of many states of constitutional feebleness is universally admitted. On this account we felt constrained some years ago to recommend the removal of the Bluecoat School; for the Cimerian darkness of Newgate-street is not fitted for the development of young creatures who ought during their school life to double or treble their body weights. Our suggestion (which is soon to be carried out) would not have been necessary had London been blessed with a clear atmosphere. Some of the great endowed schools of London have already been removed to the country, others are to follow, and thus the citizens will be deprived, mainly by this foul atmosphere, of those educational advantages provided for them by benevolent ancestors. We remember once meeting a sporting gentleman who pooh-poohed these notions about sunlight and purity of atmosphere being necessary for the healthy development of the young; but when we asked him if he would like to keep a Derby favourite in a London mews and train it in Hyde-park, he altered his tone, and evidently did not approve of any blasphemous comparisons between mere babies and thoroughbred yearlings. In these days of competition, when every child is, willy nilly, entered for a race as soon as born, the question of a favourable situation for healthy development is doubly important.

Besides the absence of light there is the positive evil of the presence of artificial light during the greater part of the twenty-four hours, so that we are compelled to breathe air laden with the products of combustion, even during the daytime. If London blacks could be abolished, London ought to become a very favourite winter residence. It is one of the best drained, best sewered, best paved, and cleanest city in the

world; and having a temperature some degrees higher than the open country, and its resources for intellectual enjoyment being unrivalled, it ought to form, in winter, a focus of attraction to all classes. As it is, however, physicians are obliged to forbid patients to come to town in the winter if there is the slightest suspicion of lung disease, and are constrained either to keep them in the country or to send them abroad in search of fresh air and sunlight. It is recognised, also, that London is a bad place for convalescents, and that for complete recovery from illness a removal from town is absolutely necessary. The effect of this upon the value of house property, upon trade, and, lastly, upon the pockets of our own profession in London, we need not stop to inquire. The only wonder is that anybody not actually compelled will consent to live in a town where flowers cannot be made to grow, where sunlight is a rarity, where all we touch is smutty, and where the very statues in the streets succumb to the biting acidity of the atmosphere. To set off against all this positive evil there is the hypothetical antiseptic power of the smuts, which is said to be as inimical to disease germs as to other forms of life. Be this as it may, it is certain that we have our share of so-called zymotic diseases in London.

There is little doubt that the nuisance is extending. As the population increases chimneys increase also, and there are now, at least, as many chimneys as persons in this overgrown town. As the smut-producing area is being increased, it is obvious that the central parts of that area are certain to be overcast whenever the wind is much short of half a gale, no matter what may be its direction.

The evil being so great and so ruinous to the inhabitants, it behoves us to set to work seriously to remedy it; and we have no doubt that it only needs a little wise legislation in order to greatly mitigate, if not to entirely cure it. Suppose a law were passed simply disallowing a chimney to vomit forth blacks, what are the remedies to which we might have recourse? First, there is the employment of smokeless fuel, such as gas, coke, anthracite, peat, and wood. The rich would still be able to enjoy the luxury of an open fireplace without at the same time sending forth a shower of blacks from the chimney tops; and gas might certainly be used for all mere heating and cooking purposes. Possibly a supply of hydrogen might be forthcoming for heating purposes, which should be at least as economical as coal. It is needless to say that during the past few years great improvements have been made in stoves of all kinds. We now derive a far greater amount of available heat from a given quantity of fuel than formerly was the case, and a very small amount of pressure is needed to make the employment of such stoves universal. At present houses are built without a thought for their economical and efficient warming, and the dozens of houses which are finished every day in London and its neighbourhood have all the faults of construction observable in those which are two centuries old.

Something might at least be done to prevent the low chimneys of mews from sending their blacks directly into the windows of the drawing-rooms and bedrooms of the big houses adjoining them, and if no chimney of a furnace or fireplace in which coal or wood is consumed were allowed to be of a less height than, let us say, sixty or eighty feet, we should be relieved of some of the disadvantages of living in a land the wealth of which is largely dependent upon coal.

WHAT IS A COLD BATH?

THE season of the year when very many people who have experienced pleasure and advantage from a daily cold bath have to discontinue the practice is come. Months will elapse before the return of genial weather will allow of their indulgence in what may be termed man's natural stimulant. Among the young and robust there are a large number who are able to bathe even in the depths of winter; the advantage of so doing is, however, questionable. But let it be once well understood what a cold bath really is, and the course by which we can avoid Scylla and Charybdis will be obvious. A cold bath is not necessarily a bath in water of the temperature of the atmosphere. A bath is truly and really cold when it produces a certain physiological effect—a slight momentary shock followed by pleasant and lasting reaction. These effects are for the majority of people most pleasantly obtained by bathing in water about 35° to 40° below the temperature of the body—the usual temperature of unheated water in June and July. Bearing this in mind we can enjoy our physiological "cold" bath as safely and pleasantly at Christmas as at Midsummer, and there is no necessity for the most timid or weakly to discontinue his morning tub because the summer weather is over. When the water sinks below a temperature of 60°, let it be heated to that point and then used, and we shall still have our "cold" bath, though of heated water. The daily stimulant effect of such a bath is so beneficial to the great majority of persons and is of such marked service in maintaining health, that it is very important to have it widely known that a cold bath may be taken all the year round provided cold is not mistaken to mean "at the temperature of the outer air." To heat our bath during the winter months is too often thought to be unmanly, while in reality it is truly scientific, and to bathe in unheated water all the year round, whatever the temperature that water may be, is to prove oneself an ignorant slave of outward circumstances.

OUR MILITARY PRISONS.

IN the report on the discipline and management of the military prisons for the year 1879, recently presented to Parliament, the Inspector-General, Colonel Sir E. F. Ducane, R.E., says nothing whatever of the health of the prisoners. In the appendix, it is true, there are extracts from the reports of the medical officers of most of the prisons, the general tenour of which is that the state of health of the prisoners has been satisfactory. There is also a "return of sickness during 1879," which enables us to test the accuracy of these reports, and which yields some remarkable results. During the year 1879 there were on the average 2170 soldiers constantly undergoing imprisonment in the United Kingdom. Of these 1180 were in civil prisons, 437 in military prisons, and 553 in the military division of Millbank Prison. The military prisons were six in number, including Millbank under that head, and it is to them only that the return of sickness applies. They were Millbank, Gosport, Glencorse (in Scotland), Cork, Dublin, and Limerick. The cases of sickness in them during the year amounted to 400 per 1000 of the average daily number of prisoners, the proportion constantly sick to 37·69 per 1000, and the average duration of the cases to 34·41 days. There is no column in the table for deaths. In the extract from the report of the medical officer at Millbank two are stated to have occurred in that prison; none are reported in the other prisons, but this may possibly have arisen from prisoners occasionally being sent to the military hospitals when seriously ill, whose deaths, if they occurred there, would not appear in the prison returns. The results above stated show the proportion of cases to have been scarcely half, but their duration double that which occurs among troops serving in the United Kingdom, and the average constantly sick to have been about 2½ per 1000 less than among the troops. It is probable that the lower ratio of cases is due to the men not being exposed to those causes of disease which arise from their own dissipation or recklessness, while their long duration depends upon the care taken to prevent men escaping any part of their punishment for trifling causes. But if we calculate the results for each of the prisons separately there will be

found to exist so striking a diversity as to require some explanation. This is clearly shown in the following table :—

	Ratio per 1000 of strength. Cases.	Constantly sick.	Average duration of cases.
Millbank..	238·9	41·30	63·24 days.
Gosport ...	700·0	42·27	22·56 ,,
Glencorse..	560·0	28·85	18·80 ,,
Cork	1280·4	30·79	8·75 ,,
Dublin	227·5	32·76	52·56 ,,
Limerick ..	392·9	17·29	16·06 ,,

The enormously high proportion of cases at Cork, with the very short average duration, would lead to the supposition that too great facility existed there for getting upon the sick list for trifling causes, while the low ratio at Millbank and Dublin, coupled with the long average duration, would tend to show that great care was taken to prevent prisoners escaping any portion of their punishment for more trifling ailments. The great range in the proportion of cases and in their duration would seem to call for a searching inquiry into the manner in which the different prisons are conducted, and the duties of the medical officers are discharged. As no information is given in the report as to the diseases which have prevailed among the prisoners, it is impossible to form any conjecture of the causes of the great differences which exist. We can only call attention to the subject in the hope that the Inspector-General and the military authorities may institute a searching inquiry with a view to determine how far these differences arise from preventable causes, and whether they may not in some instances depend upon inefficient or injudicious management. It is to be regretted that no information is given as to the sickness among the soldiers confined in the civil prisons, as a comparison of the health of the men under the two different systems might prove of practical value in ascertaining the relative merits and defects from a health point of view, as far as soldiers are concerned, of the civil and military prisons respectively.

AN EDISONIAN ANÆSTHETIC.

READERS of *Punch* will remember an amusing parody of Edison's mode of announcing his discoveries, in which the parturient mountain and muscipular abortion were illustrated, if we remember aright, by an elaborate description of a new life-restoring beverage, which proved to be an infusion of tea. Truth is stranger than fiction, or at least as remarkable, and the parody of the satirist was—unless the *English Mechanic* has hoaxed its readers and many other respectable journals—a true prophecy. Physicians have been blundering for some hundreds of years in attempts at the relief of pain by external applications, but it has been reserved for Mr. Edison to solve the problem by a stroke of genius! They have discovered that various substances, organic and inorganic, lessen sensibility and relieve pain, and have used them singly and in various combination, and will look with eagerness, not unmixed with misgivings, for the addition to their armamentum which Mr. Edison offers them. Their misgivings will not be misplaced. The inventor of the phonograph, and of the electric lamp of the future, gravely proposes as his latest invention to mix certain familiar anæsthetics together to make a new one. In the words of the *English Mechanic*, "Mr. Edison's idea is to use a compound *(sic)* of a number of the most powerful chemical substances which act anæsthetically, and which have no effect upon each other. The invention further consists in placing in such compound various menstruums *(sic)* for dissolving the substances, which menstruums shall have no chemical action on each other, or upon the substances beyond effecting their solution. The object of placing in one compound all of the most powerful chemicals which act anæsthetically is to ensure the action of one of them—that is to say, if one does not act, the other may. ..... The ingredients which are used are hydrate of chloral, chloroform, ether, nitrite of amyl, morphia, camphor, alcohol, oil of peppermint, salicylic acid, and oil of cloves." Such is the precious compound which Mr. Edison is alleged to have "invented." It is scarcely an exaggeration to say the discovery is on a par with that of a sportsman who should propose to load his gun, at one and the same time, with a bullet, small shot, and a tallow candle, so that the charge may be equally available whether his mark be a stag, a sparrow, or a deal board.

SURGEON-MAJOR HANNAH.

THE General Commanding the Allahabad Division has issued the following Brigade Order touching the death of Surgeon-Major Hannah, in the terrible landslip at Naini Tal: "It is with the deepest regret that the Brigadier-General Commanding has learnt that, in the very serious calamity which occurred at Naini Tal, owing to a landslip on the 18th instant, many valuable lives of officers, soldiers, and others, have been lost, and that among these, Captain Goodridge, of the 35th N. I., and Surgeon-Major Hannah, A. M. D., attached to, B Brigade, 4th Battery, R. A., stationed at Allahabad, have perished. Brigadier-General Cobbe was unacquainted with Captain Goodridge, but he deplores his sudden and premature death. From personal knowledge, he can testify to the great loss sustained by the death of Surgeon-Major Hannah, whose unsparing exertions durin the late cholera epidemic will still be fresh in the minds of many. He is sure that Dr. Hannah will be sincerely regretted by every officer and soldier who has had occasion to know him in his professional capacity, while many will lament the loss of a friend taken thus suddenly in the prime of life and usefulness."

CONVALESCENT HOME FOR SCARLET-FEVER PATIENTS.

WE are glad to learn that a scheme has been set on foot by Miss Mary Wardell for the establishment of a convalescent home for the reception of scarlet-fever patients. There is no disease which needs such careful tending during convalescence, but the period during which the patient is dangerous to others is so long, that it precludes the possibility of his being sent to any of the ordinary convalescent institutions. The establishment of such a home would not only be of undoubted use to the patients themselves, but, by preventing them from returning too early to their ordinary vocations, it would lessen the risk of infection to others. Miss Wardell's scheme is still in embryo, but we feel sure that it only needs to be ventilated in order that it may soon enter upon its real life and pursue a career of very great utility. Of moral support Miss Wardell has no lack. The heads of our own profession, and many leading members of the aristocracy and philanthropocracy concur in approving the scheme and wishing her God speed. The sinews of philanthropy, after all, however, is money, and we trust that many will be found to put their hands deep into their pockets enable a site to be purchased and a suitable house to be commenced upon it forthwith.

UNINFLAMMABLE TISSUES.

THE French Société d'Encouragement pour l'Industrie Nationale has awarded to M. Martin, of Paris, a prize of 1000 francs for his preparations for rendering wood and textile fabrics uninflammable. For wearing apparel, &c., a mixture of sulphate and carbonate of ammonia, boracic acid, borax, starch and water is used, and several other preparations for similar uses are described. All seem well adapted for their purpose, although no remarkable novelty can be observed in them.

We have repeatedly urged that the use of some such preparations in theatres should be made compulsory, and

cannot help regretting that the Lord Chamberlain, who exercises so paternal an authority over the dresses which actresses wear, should be unable or unwilling to compel their safety from fire. Frightful accidents happen from time to time on the stage from the neglect of precautions which are well known and inexpensive, and such accidents, affecting as they do the safety of the audience as well as of the performers, are a disgrace to our stage censorship.

ANTISEPTIC INFLATION.

MR. J. HOLDEN WEBB, of Melbourne, has recently published a paper in the *Australian Medical Journal* describing and advocating a new plan of rendering old sinuses and putrid abscess cavities aseptic. At first such cases were dealt with by injections of carbolic acid lotion; more recently Volkmann has introduced his sharp spoons, by means of which the unhealthy granulation tissue forming the walls of such passages and cavities can be removed, and inasmuch as there is good ground for believing that septic organisms not only exist in the putrid discharge but also infest the secreting walls of such cavities, this must be considered, and, indeed, has proved, a valuable adjunct to the simpler plan of injections only. In dealing with very large cavities, irregular and sacculated, such as are particularly met with in connexion with disease of the spine, it is obviously very difficult, if not impossible, to inject fluid so thoroughly that it shall penetrate into every corner and exert its germicide property on every part, and in these cases also the use of Volkmann's sharp spoons is necessarily limited within very narrow bounds. It was for such cases that Mr. Webb tried inflation with carbolised air, as being more likely to give success. His apparatus is simple. Into a Florence flask he puts some crystallised phenol, and through the cork, which fits tightly, he passes two glass tubes, one passing to the bottom of the flask, the other only just beyond the cork. These tubes are bent at right angles just above the cork. To the long tube a Richardson's bellows is fixed. When in use the flask is raised on a stand, the acid melted and heated by a spirit lamp, and air forced by the bellows through the acid in the flask, and by the shorter tube into the cavity to be inflated. All the force of the hand is used in the inflation, the cavities being tightly distended, and although it "often makes the patient drowsy for some hours afterwards, and sometimes renders the urine smoky," Mr. Webb has not met with any ill effects. Thymol inflation has been followed by disagreeable sickness. In his paper cases of old sinuses, spinal and other abscesses, submitted to this treatment are detailed, and it is stated that the results in correcting septicity of discharge, and therefore in checking suppuration, fever, and hectic, and hastening recovery, have been very satisfactory.

THE PATHOLOGICAL SOCIETY'S DEBATE.

THE debate on Rickets will be opened on Tuesday, Nov. 16th, by Dr. Hilton Fagge. It will assist the Secretaries of the Society if gentlemen who intend to speak will inform them of the fact, so that suitable arrangements may be made. The debate will of course be quite open, and no previous notice to the Secretaries is necessary before taking part in it. The subject is well chosen, the duty of opening the debate wisely allotted, and we may expect a valuable discussion.

THE HERTS CONVALESCENT HOME.

THE new building of this institution is to be opened under royal and noble auspices at St. Leonards on the 28th inst. It is gratifying to be assured that the institution will be governed by a managing committee, the constitution of which will be satisfactory to all parties. The existence of such a committee makes the institution a public one, and throws on the public the pleasant and binding duty of supporting it. We do not quite understand the restriction implied in the title. Is it that only Hertfordshire men are to be allowed the pleasure of contributing, or that Hertfordshire patients only are to share and use the institution?

MANAGEMENT OF NATURAL LABOUR.

DR. J. W. SINGLETON, of Paducah, Ky., in a paper read before the Tri-State Medical Society on the Management of Natural Labour, argues strongly in favour of the use of the abdominal bandage before delivery as well as after, and of a dose of ergot of rye just before delivery. There is a tendency to what our American brethren call "hyfalutin" in Dr. Singleton's style of writing, but his strong advice in favour of the bandage and ergot may be recorded, the more so as he attributes to them the fact that, during twenty-five years' practice, he has never had a serious case of post-partum hæmorrhage. There is still to be found, or to be heard of, now and again a practitioner who does not apply a binder after delivery. This, we think, a great omission, and there is something to be said for having it placed before delivery, so as to exercise a little gentle pressure on the abdomen and uterus before delivery takes place.

HOSPITAL SUNDAY IN CUMBERLAND AND WESTMORELAND IN 1880.

THE sum of £1176 13*s.* 11*d.* has been obtained for the benefit of the five principal medical charities connected with the counties of Cumberland and Westmoreland in the present year, and the sum of £10,349 2*s.* 11*d.* in the eleven years since the fund was established. The names of the institutions which participate in the collections are as follows:—The Cumberland Infirmary, the Carlisle Dispensary, the Carlisle Fever Hospital, the Cumberland and Westmoreland Convalescent Institution, at Silloth, and the Whitehaven and West Cumberland Infirmary. Each charity has a medical representative on the committee of the fund.

THE Royal Free Hospital has, it is stated, become entitled to a moiety of the estate of the late William Birks Rhodes, valued at £78,000; the other half going to the National Life Boat Institution.

DR. AQUILLA SMITH has been re-elected for the ensuing year a representative of the College of Physicians in Ireland, on the General Medical Council.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Hampstead (estimated population 45,500).—Dr. Edmund Gwynn, in making this, his first, annual report as medical officer of health for the parish of St. John, Hampstead, has injudiciously followed the course of adapting his report to the practice followed in other parochial reports for his district. His report refers to the twelve months ending March 25th, 1880—to a period, in fact, not comparable with the yearly period included almost invariably in reports of this kind throughout the kingdom, and more especially with the returns of the Registrar-General. The inconvenience of adopting this course is made sufficiently obvious in the report itself; as, for example, we find Dr. Gwynn using the Registrar-General's computed death-rate for England and Wales for 1879—that is, for the year ending in December; while he gives the death-rate for Hampstead for the twelve months ending the 31st March following, not even keeping

to the parochial year, the 25th! Again, in Table V. of his report, relating to the mortality from the principal zymotic diseases in Hampstead during the ten years 1870–79, Dr. Gwynn adopts the ordinary year, no guidance being given as to the distribution of the deaths in the parochial year followed in the report. Evidently much more is lost to Hampstead in the removal of the means of comparison of the vital statistics of the place with those of other places than is gained by adapting the form of the report to that of others with which it has nothing in common.

The birth-rate of Hampstead for the year ending the 31st of March, 1880, was 22·98 per 1000 inhabitants; the death-rate 13·07, or, deducting the deaths of non-residents, 12·4. The low birth-rate is attributed in part to the large proportion of persons well advanced in life among the inhabitants, and of domestic servants employed. The very low death-rate, notwithstanding that we are disposed to esteem Hampstead very highly as a healthy place of residence, suggests that the population may have been estimated at too high a number. Dr. Gwynn has, happily for his district, to make a very uneventful report. Since the closure of the small-pox hospital, no death from that disease has occurred in Hampstead, but this does not imply that the parish has been free from the disease during that period, for it appears that several cases occurred, two of which were sent to the Homerton hospital, and one to Highgate. The result of the cases so sent is not stated. Dr. Gwynn has a remark on water cisterns which deserves notice. He says: "Whilst the cisterns of our poorer neighbours are well looked after by the sanitary inspector, there is often considerable neglect on this head in houses of a better class." The following observations on new buildings are also worthy of attention: "The rapid strides that building has made during the past year in this parish deserve remark. The majority of the newly-erected houses are spacious and well-fitted with modern sanitary requirements. Additional accommodation is yet needed, both for the poor native to the place, and for those attracted hither by the building operations. To meet their requirements a class of cheap houses spring up, built often with inferior materials. Although the plans for their drainage have been submitted to, and approved by, the Vestry, yet bad workmanship, together with inferior fittings, soon give occasion for complaints, only too well-founded. The habits of the poor—washing, cooking, and living in the same room—rapidly lead to dirty walls and ceilings, which require the constant supervision of the sanitary inspector. Planned for the use of one family, they are not adapted for lodgings, the cooking appliances are inadequate, and the closet accommodation is often poor. The problem of providing fitting buildings for the poor is a difficult one to grapple with. The difficulty consists in supplying the accommodation for families whose bread-winner earns little more than 22*s.* per week. It is obvious that from three to four shillings per week for rent is all the strain such an income will bear, and this is the value of one small room in Hampstead. Overcrowding becomes, to a certain extent, inevitable. Whilst seeking to avoid pauperising the labouring man, it is for this class that relief must be sought. Hitherto it has been found that the tendency of charitable bodies, such as the Peabody Trustees, has been to draw down the better class of well-to-do work-people to the superior accommodation provided rather than to raise the lowly."

TYPHOID AT CHURCH COPPENHALL.

An "alarming" outbreak of typhoid fever is reported to have occurred at Church Coppenhall, near Crewe. Thirty cases were notified in a few days, and of these four had already died. The locality is stated to be entirely without sewerage, "slops" and surface drainage finding their way into the ditches and hollows by the roadside. The water-supply until very recently was derived wholly from shallow wells, or from surface ponds, and much of it was, and still is, necessarily greatly polluted. Within the last few weeks, however, a main has been carried to the place from the London and North-Western Railway Company's Waterworks at Crewe, but as yet few of the inhabitants have taken a supply from thence. It is to be feared, moreover, that the high rates charged for the Company's water will interfere with any rapid extension of its use. The rector and surveyor have been diligently at work endeavouring to induce householders to take their water from the new source, and a house-to-house visitation has been made by them; but we are given to understand that until some measures are taken to secure the sewerage of the village, there will be little hope of effective removal of the conditions upon which the outbreak seems to have depended.

SCARLET FEVER IN PADDINGTON.

It would appear as if the recent extensive prevalence of scarlet fever in Paddington was about to be shown to have originated from infected milk, and that the outbreak would closely parallel in the circumstances of its occurrence the outbreak of typhoid fever which occurred in Marylebone a few years ago, and which also was traced to infected milk. The suspected milk was derived from certain farms near Thame in Oxfordshire, and in two of them Dr. Stevenson, the medical officer of health for Paddington, on inspection has discovered numerous cases of scarlet fever, some in a state of convalescence, affecting the milkers among others. From farms in the same neighbourhood came, it will be remembered, the infected milk which caused the outbreak of typhoid fever in Marylebone. A writer in the *Globe* of Thursday states that the milk is no longer supplied from the Thames districts, where the cause of the late outbreak of scarlet fever has been traced.

A deputation of the Sanitary Committee of the Corporation of Leeds recently waited upon the Board of Guardians of the town with reference to dealing with cases of infectious disease. The Corporation, as sanitary authority, had been called upon to remove many cases to the House of Recovery (Fever Hospital), and it found considerable difficulty in discriminating those cases which should, as pauper cases, be dealt with by the Board of Guardians, and those, as non-paupers, which should be dealt with by the Corporation. The Sanitary Committee asked the assistance of the Board in removing the difficulty they felt, more especially as the Corporation had to pay a greater sum per week for the treatment of cases sent to hospital by them than the guardians. The clerk of the guardians pointed out that the law was precise as to the duties of the guardians in the matter, and it would not admit of the arrangement suggested by the deputation. Pauper cases must be dealt with by the relieving officers in the first place, and in an appointed way; whereas the sanitary authority could give sole attention to the necessities of the public health. Whereupon the spokesman of the deputation observed that, if the law stood in the way of such common agreement between the guardians and Corporation as the deputation had hoped to be possible on the subject, there was an end of the matter.

Dr. Goldie's report on the sanitary condition of Leeds for the month of September shows the lowest excess of births over deaths he has yet had to record. This is accounted for by the very high death-rate of the period, which was 27·9 per 1000 population, as compared with 18·2 for the corresponding period of 1879. The mortality amongst infants under one year was no less than 300·5 per 1000 born. Commenting on infectious diseases prevalent during the month, Dr. Goldie says he has found that by posting the infected districts with large precaution bills he has to a certain extent drawn public attention to the danger of exposing the infected amongst the healthy. Parents have become more circumspect both with regard to the treatment of the cases in their own families and to the precaution of avoiding needless contact with families already infected. "The whole secret of prevention," he adds, "lies in this and complete isolation." Dr. Goldie has some observations on the provision of infectious-disease hospital accommodation in Leeds, which show that the sanitary authority has by no means given the attention to this subject which would be anticipated from the authority of so important a town.

The outbreak of scarlet fever still appears to continue at Chesham. Considerable difficulties are experienced in inducing parents to send their children to the sanitary authority's hospital, and the want of tact displayed by the authority in the beginning of the outbreak impedes its efforts to deal effectually with the outbreak now.

A motion was submitted to the rural sanitary authority of Ware, on the 5th inst., to the effect that in the opinion of the board the medical officer of health for the rural sanitary authorities of Bishop's Stortford, Hertford, Ware, and Buntingford unions, and the Stortford urban sanitary authority, "cannot efficiently discharge the duties of his office unless he is restricted from engaging in private practice within the limits of his district." It was pointed out in

the course of the discussion which followed, that, by the terms of the motion, the holder of the office would not be prevented from entering upon private practice outside the limits of the district, and the motion was lost by nearly two votes to one.

A deputation of the Local Rights Association was received by the Metropolitan Board of Works at its meeting on the 15th inst., and, with reference to the action of the Board in regard to their clearances and to dwellings for the working classes, urged the serious injury suffered by working men from removal, and contended that the Board should seek power to erect dwellings for them at the lowest practicable rents.

At the last monthly meeting of the Whitby Local Board, Dr. Taylerson, the medical officer of health, stated that although there had been 4000 visitors in the town during the quarter, the death-rate had kept under 15·0 per 1000 population, and the general state of health of the place had been better than it had ever been before.

The metropolitan sanitary authorities appear to be taking up the question of mortuaries vigorously. Bethnal Green has just completed one, St. Giles-in-the-Fields has decided to erect one, and now St. Pancras is considering the propriety of building one.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

The rate of English urban mortality continues satisfactorily low. In twenty of the largest English towns, estimated to contain in the middle of this year a population of seven and a half millions of persons, or nearly one-third of the entire population of England and Wales, 5334 births and 3073 deaths were registered last week. The births exceeded by 149, while the deaths were 202 below the average weekly numbers during 1879. The deaths showed a decline of 44 from those returned in the previous week, and were equal to an annual rate of 21·4 per 1000, against 21·3 and 21·7 in the two preceding weeks. The lowest death-rates in the twenty towns last week were 15·4 in Bristol, 18·5 in Wolverhampton, 19·0 in Sheffield, 19·8 in Manchester, and 20·0 in London. The rates in the other towns ranged upwards to 25·5 in Sunderland, 26·7 in Oldham, 28·9 in Hull, 29·7 in Leicester, and 30·6 in Salford. The high rates in the five last-mentioned towns were mainly due to excessive zymotic fatality. During the thirteen weeks ending on 2nd inst., the death-rate in the twenty towns averaged 23·2 per 1000, against 23·8 and 18·3 in the corresponding periods of 1878 and 1879.

The deaths referred to the seven principal zymotic diseases, which had been 912, 657, and 617 in the three preceding weeks, further fell last week to 564; of these, 232 resulted from diarrhœa, 14 from scarlet fever, 75 from fever (principally enteric), and 56 from whooping-cough. The annual death-rate from these seven diseases averaged 3·9 per 1000 in the twenty towns, and ranged from 1·7 and 2·8 in Newcastle-upon-Tyne and Plymouth, to 7·0 and 8·7 in Sunderland and Salford. The death-rate from diarrhœa did not exceed 0·9 per 1000 in London, but ranged upwards to 3·3 in Leeds, 4·1 in Wolverhampton, and 4·2 in Salford. The deaths from scarlet fever corresponded with the number returned in the previous week, and showed the largest proportional fatality in Sunderland, Salford, Oldham, and Liverpool. Measles was somewhat prevalent in Leicester. The death-rate from enteric fever was excessive in Liverpool, Bradford, and Leeds. Small-pox caused six more deaths in London, but not one in any of the nineteen large provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had been 105, 95, and 92 at the end of the three preceding weeks, further declined to 85 on Saturday last; 16 new cases were admitted to these hospitals during the week, against 24 and 14 in the two previous weeks. The Highgate Small-pox Hospital contained nine patients on Saturday last.

The deaths referred to diseases of the respiratory organs in London, which had steadily increased from 124 to 266 in the five preceding weeks, further rose to 273 last week, and exceeded the corrected weekly average by 31; 164 resulted from bronchitis, and 68 from pneumonia. The annual death-rate from lung diseases was equal to 3·9 in London, and 4·9 in Liverpool.

HEALTH OF SCOTCH TOWNS.

In eight of the largest Scotch towns, having an estimated population of rather more than a million and a quarter persons, the annual death-rate last week averaged 22·4 per 1000, against 18·8 and 19·6 in the two preceding weeks; this rate exceeded by 1 per 1000 the average rate in the twenty large English towns. The rates in the eight Scotch towns ranged from 19·1 and 20·4 in Paisley and Leith, to 25·3 and 27·4 in Perth and Edinburgh. The fatal cases of the seven principal zymotic diseases in the eight towns which had been 134 and 116 in the two preceding weeks, rose again to 135 last week; they included 52 which were referred to scarlet fever, 23 to fever, 20 to diarrhœa, 18 to diphtheria, 18 to whooping-cough, 4 to measles, and not one to small-pox. The annual death-rate from these seven diseases averaged 6·4 per 1000 in the eight towns, and exceeded the rate from the same diseases in the twenty English towns by 1·4 per 1000. The zymotic death-rate in the eight Scotch towns ranged from 1·5 and 1·9 in Aberdeen and Perth, to 6·2 and 8·8 in Leith and Edinburgh; the high death-rates in the two latter towns were due to scarlet fever fatality. The fatal cases of scarlet fever in the eight towns, which had been 45, 33, and 30 in the three preceding weeks, rose to 52 last week, and included 23 in Glasgow, 22 in Edinburgh, and 5 in Leith. The 23 deaths referred to fever (including typhus and enteric, or typhoid) also showed a marked increase upon recent weekly numbers; 15 occurred in Glasgow and 5 in Edinburgh, showing in each case an exceptionally high rate of fatality. The 20 deaths from diarrhœa showed a further marked decline from the numbers in the four previous weeks, which had decreased from 69 to 46; the largest proportional fatality from this disease occurred last week in Edinburgh and Dundee. The deaths attributed to acute diseases of the respiratory organs (bronchitis, pneumonia, and pleurisy) rose to 98 in the eight towns last week, from 76 and 66 in the two preceding weeks; the annual death-rate from these diseases last week was equal to 4·0 per 1000 in the eight Scotch towns, against 3·5 in London.

HEALTH OF DUBLIN.

A further slight decline from the recent excessive rate of mortality occurred last week in Dublin. The annual death-rate in the city has slowly but steadily decreased in the past five weeks from 39·3 to 33·0. During the thirteen weeks which ended on Saturday, 2nd inst., the death-rate in the city averaged, however, no less than 34·6 per 1000, against 21·3 in London, and 21·8 in Edinburgh. The 199 deaths in Dublin last week were 2 less than those returned in the previous week, and included 50, or 25 per cent., which were referred to the seven principal zymotic diseases, showing a further decline of 2 from recent weekly numbers; 14 resulted from diarrhœa, 10 from fever (including typhus and enteric), 9 from scarlet fever, 8 from whooping-cough, 4 from small-pox, 3 from measles, and 2 from diphtheria. The annual death-rate from these diseases was equal to 8·5 per 1000 in Dublin, whereas it did not exceed 3·0 in London, and was 8·8 in Edinburgh. The fatal cases of diarrhœa, which had been 44, 33, and 22 in the three previous weeks, further declined to 14 last week, but were equal to an annual rate of 2·3 per 1000, whereas in London the rate from diarrhœa did not exceed 0·9. The 10 deaths referred to fever showed an increase of 3 upon those in the previous week. The deaths from scarlet fever and diphtheria were also more numerous, whereas those from measles and whooping-cough showed a decline. The 4 fatal cases of small-pox exceeded the number returned in any week since the middle of August. The rate of infant mortality showed a further slight decline last week, but the proportion of deaths under one year during the thirteen weeks of last quarter were equal to 252 per 1000 of the births registered, while in London the proportion during the same period did not exceed 164 per 1000.

SUMMER DIARRHŒA IN 1880.

The prevalence and fatality of infantile diarrhœa have been exceptionally severe among the urban population of England during the past summer. In the twenty large English towns dealt with in the Registrar-General's Weekly Return, no less than 8292 deaths were referred to diarrhœa during the thirteen weeks ending 2nd inst., against 7675 and 2245 in the corresponding periods of 1878 and 1879. These deaths were equal to an annual rate of 4·4 per 1000 of the estimated population of the twenty towns. The diarrhœa

rate was 3·3 per 1000 in London, and averaged 5·6 in the nineteen large provincial towns. The lowest death-rates from diarrhœa last quarter in the provincial towns were 2·4 in Bristol, 3·3 in Oldham, and 3·8 both in Portsmouth and Plymouth; the rates in the other towns ranged upwards to 6·8 in Norwich, 7·8 in Hull, 8·4 in Salford, and 10·6 in Leicester. Thus, notwithstanding the marked general increase in the fatality of diarrhœa last quarter, the same towns are to be found at the top and bottom of the list as in former years, when the mortality from this cause was much lighter. Year after year, the least fatality of diarrhœa occurs in Bristol and Oldham, and the greatest in Hull, Salford, and Leicester. The average fatality of diarrhœa in the twenty towns last quarter showed but a slight increase upon that which prevailed in the corresponding period of 1878, but the relative rates in the several towns in the two summers varied considerably. In Hull, for instance, the rate last quarter was 7·8 per 1000, and 2·4 lower than that which prevailed in the summer of 1878; in Salford and Leicester, however, the rates showed last quarter an excess of 2·0 and 1·6 per 1000 respectively. The fatality of other diseases of the zymotic class were last quarter below the average in the large English towns, but in consequence of the exceptional mortality from diarrhœa, the annual death-rate from all causes in the twenty large towns averaged 23·2 per 1000 of the estimated population, against 20·4, 23·7, and 18·3 in the three preceding corresponding quarters. Assuming that the rate of mortality in these twenty towns bore the same relation to the rate of mortality in the whole of England and Wales which usually prevails in the third quarter of the year, we may estimate the death-rate last quarter in the entire country at nearly 21·0 per 1000, which would exceed the rates which have prevailed in any corresponding quarter since 1870 and 1871, when they were 22·0 and 21·1 per 1000 respectively. Until the publication of the Registrar-General's Quarterly Return we shall have no authentic figures showing the total cost of the late hot summer, especially to infant life, but from local reports upon the health of many urban sanitary districts there is good reason to believe that a marked excess prevailed throughout a large proportion of the manufacturing and mining populations of the Midland and Northern counties.

RATES OF MORTALITY IN EUROPEAN CITIES.

The rates of mortality in most foreign cities compare most unfavourably with those that prevail in the large towns of the United Kingdom. In the second quarter of this year the annual rate of mortality in twenty of the largest English towns, having an aggregate population of about seven and a half millions of persons, averaged only 20·4 per 1000; whereas in twenty European cities the rate averaged 32·4. This remarkable excess in the death-rate signifies that the mortality in the European cities was 59 per cent. higher than that in the English cities, or, in other words, in equal numbers living, 159 died in the foreign cities to each 100 in the English cities. This marked excess in the death-rate in foreign cities is pretty constant, but the rates last quarter showed more than the usually wide variations; they ranged from 19·9 and 21·3 in Christiana and the Hague, to 39·8 in Buda Pesth, 40·5 in Munich, and 54·8 in St. Petersburg. In Madrid the rate was equal to 37·3, and in Monaco 40·5. In three of the largest Italian cities high rates also prevailed, 30·2 in Milan, 32·2 in Naples, and 33·7 in Rome. In Paris the rate was but slightly lower, it was 29·9 against but 19·4 in London, the excess being in a great measure due to the fatality of zymotic disease; the deaths in the three months included 1043 from diarrhœal diseases, 691 from small-pox, 595 from diphtheria, 485 from typhoid fever, 343 from measles, 127 from whooping-cough, and 110 from scarlet fever. The death-rate last quarter was equal to 35·8 in Bucharest, 39·7 in Odessa, and 40·6 in Lemberg. The interchange of mortality statistics between different cities will doubtless tend to call attention abroad to the high death-rates which are still continually reported, and we note with hopeful interest that most of the European and American States now publish side by side with their own local mortality statistics, a selection of those reported in all parts of the civilised globe. With the rapidly increasing facilities for intercommunication no nation can now afford to regard with indifference, if only on selfish grounds, sanitary neglect among the peoples with whom they hold constant intercourse.

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

INFECTIOUS-DISEASE HOSPITALS.

The account given by Sir John Rose Cormack, M.D., at the Social Science Congress, of Dr. Bertillon's inquiry into the presumed influence exercised by the small-pox hospitals of Paris on the prevalence of that disease in their immediate neighbourhood does not, it appears to us, call for any modification of the opinion we expressed when the results of the inquiry were first published. Granting that Dr. Bertillon was right in the statistical evidence he gave of a greater prevalence of small-pox in the neighbourhood of the hospitals than elsewhere in Paris, his inference that this prevalence depended upon some general diffusion of small-pox contagion from the hospital building, and not upon the more familiarly known ways of the spread of small-pox, seemed to us to be almost wholly gratuitous, and had no more claim to a scientific conclusion than the popular opinion formed to the same effect by a section of our general population with regard to the influence of the metropolitan small-pox hospitals on their neighbourhood. We regret to find Dr. Cormack so far adopting Dr. Bertillon's inference as to use the phrases, "a poison-charged drift of epithelial scales," "the epithelial drift," &c.; and we think there must be a misprint in the reporter's statement of the proceedings of the Congress, when Dr. Cormack is represented as stating, in effect, that the poisonous epithelial drift may extend a quarter of a mile and then prove infective. Dr. Cormack's statements did not carry conviction to those of his hearers most capable of judging of the question, as, for example, Sir Robert Christison, Dr. Littlejohn, Dr. Semple, Dr. Wallace, Dr. Andrew Wood, Dr. Acland, &c. Dr. Acland's observations to the effect that the spread of the disease round the Paris hospitals probably arose from the fact of their being ill-managed, was of greater importance than Dr. Cormack perhaps apprehended. At any rate, it is owing to the fact that Dr. Bertillon's remarks and inferences from his inquiry as to the dissemination fail to indicate that due care was given by him to eliminate the ordinary modes in which the contagion of small-pox spreads before he called to his aid the theory of a "poisonous epithelial drift," to use Dr. Cormack's words, that we have been unable to repose confidence in that theory.

CITIZENSHIP IN SANITARY WORK.

Hitherto voluntary associations for watching the operations of sanitary authorities within their districts, seeing that they duly exercise the functions entrusted to them by the law for the benefit of the communities under their charge, and cultivating a healthy opinion among the persons concerned in regard to those functions, have, as a rule, as in the case of the Tottenham Sanitary Association, been confined to the wealthier sections of society. We remark, with no little gratification, the extension of associations of this sort among the sections of society who do not claim to be wealthy, and who, we infer, include many artisans and others of the so-called labouring classes. Our attention has been attracted by the proceedings of a meeting called together by the Local Rights Association for Promoting Rental and Sanitary Reform, and which appears to give much attention to the sanitary condition of houses and places, with a view to exercising such influence as the Association possesses in procuring improvement where needed. One remark in the report of the proceedings somewhat grates upon our feelings. It is to the effect that "the Association would continue to point out to their wealthy neighbours the danger of contagion arising from these (insanitary) causes. We venture to think that the efforts of the Association would be much more profitably directed, both as regards their wealthier neighbours and the public generally, if they were concentrated upon the sanitary authorities with a view of keeping them up to the mark in the performance of their duties. In doing this they would much more effectively reach neglectful individuals of the wealthier classes than by direct appeal to them. Moreover, we should like to see this Association, itself an indication of a move in this direction, if we err not, giving special attention to the cultivation of sounder notions of healthy house-requirements among artisans and other labouring classes. The curse of so-called "jerry-building" which has fallen upon the outskirts of the metropolis, the suburbs, and wherever building has sprung

up largely in the land, will never wholly cease unless house occupiers themselves are enlisted against it. So long as jerry-builders can find persons who will accept *their* notions of what constitutes a building and the health requirements thereof, so long this class of builders will continue, and be able to set the most active authority at defiance. There are abundant indications that dwellings, particularly cottage dwellings, improve in structure and arrangement with the improved requirements of occupiers, and this is a cardinal bit of experience which sanitary reform associations should work upon.

OUTBREAK OF TYPHOID FEVER IN CORNWALL.

The village of Newlyn East, a few miles from TRURO, and near the north coast of Cornwall, is alleged to be the scene of an alarming outbreak of typhoid fever. Out of a population of about 1600, the large proportion of 80, mostly adults, are said to be stricken with typhoid. The medical officer of health believes the origin of the fever to be due to the drinking of water polluted by sewage matter, and that its rapid spread is chiefly attributable to overcrowding and defective sewerage. The village is exceptionally well situated, as it stands upon high ground and is swept by the Atlantic breezes. Six years ago, when the population was about 700, there was a similar epidemic in the village, eighty persons being attacked, sixty lying ill at the same time. Mr. Chambre Vigurs then fought the battle single-handed, and had only five deaths. On the present occasion he estimates that not less than 100 persons have been affected. The worst is now believed to be past. Mr. Edlin, of Plymouth, has lent Mr. Vigurs some assistance. The sanitary authorities of St. Colomb have now locked up the pump which supplied the supposed source of the infection. This might have been done earlier, as pure water can be obtained within the distance of half a mile. Two trained nurses from the South Devon Hospital are now on the spot. The publicity given to the matter by the *Western Morning News* has done good service.

The children at the district schools at Brentwood have been suffering rather extensively from ophthalmia, though the affection is not of a serious tpye, and the majority of the patients are now convalescent. The disease made its appearance in July last, and spread rapidly for a time. Out of a total of 660 children, 138 are now under treatment. Of these, about twelve are confined to the wards with more or less severe complications. We understand that, at the request of the managers, Mr. Nettleship has visited the schools and consulted with the medical officer, Mr. Albert W. Wallis, and that a report has been submitted on the subject.

A memorial has been presented to the Prime Minister by the Corporation of St. Ives, Huntingdonshire, representing the serious injury to which their borough and district are exposed, in property and health, by the frequent floods of the river Ouse, owing to the impediments interposed to the free flow of the river in its course. The memorialists pray that some measure may be promoted in Parliament which shall enable them to remove these impediments.

A gentleman writing to the *Liverpool Daily Post*, in the hope of directing attention to the advantages which families may derive from the use of infectious disease hospitals, gives interesting experiences in his own family from the use of the London Fever Hospital, and the Netherfield Institution for Infectious Diseases, Everton, Liverpool. It would be well if this gentleman's example were more largely followed.

We referred a short time ago to the advantages, in a public-health point of view, claimed for foot-paths constructed of wood. But equal advantages are claimed, we find, for foot-paths constructed of brick, and the advocates of brick have this in their favour, that they can indicate examples of this sort of foot-path in confirmation of their statements, as, for example, at Brighton.

YORKSHIRE ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.—The annual meeting of this Association was held at Sheffield in the Mayor's parlour. Papers were read by Dr. Hime, medical officer of health, Sheffield, on "The recent Outbreak of Diarrhœa at Sheffield," and by Dr. Drew of Chapeltown on "Sanitation in Utopia." A number of objects of special interest to medical officers of health were on view, and the proceedings terminated with a social meeting at the Wharncliffe Hotel.

REPORT OF THE LOCAL GOVERNMENT BOARD.

I.

THE public-health portion of the Ninth Annual Report of the Local Government Board may, for our purpose, be conveniently divided into two parts—the one relating more particularly to sanitary work, the other to the operation of the Sale of Food and Drugs Act, 1875, which is given considerable prominence in the present report. We shall give attention to the sanitary work first.

During the financial year ending the 25th of March, 1879, the expenditure of the urban sanitary authorities of England and Wales was £18,663,757, and of the rural sanitary authorities £445,517. At the same date the outstanding loans of the urban sanitary authorities amounted to £56,591,080, and those of the rural sanitary authorities to £642,617. The aggregate rateable value of the urban sanitary districts at the date in question was £49,753,326. The greater portion of this indebtedness of sanitary authorities has been authorised by Parliament, but £18,824,168 of the sum has been sanctioned by the Local Government Board under the Public Health Act. Of this eighteen millions, £14,937,310 was sanctioned for sanitary improvements in urban districts other than schemes of improvement under the Artisans and Labourers' Dwellings Improvement Act, 1875; £1,176,045 for sanitary improvements in rural sanitary districts s £1,840,979 under the Artisans and Labourers' Dwellings Improvement Act, 1875; and £444,000 for sewerage works undertaken by joint sewerage boards. In the course of the year to which the report refers loans were sanctioned to urban sanitary authorities of £1,088,819 for sewerage and sewage disposal, and of £293,880 for water-supply; and to rural sanitary authorities of £191,097 for sewerage and sewage disposal, and £75,473 for water-supply.

The further experience of the Local Government Board as to the appointment of medical officers of health has led them more strongly to deprecate the appointment for small districts. They hold it inexpedient to employ district medical officers as medical officers of health, each acting within the area assigned to him as poor-law medical officer, and have been advising sanitary authorities, as opportunities have occurred, either to combine with adjoining sanitary authorities in a joint appointment for a considerable area, or, where that was impracticable, of appointing one medical officer of health only for the district within the jurisdiction of the authority, and in the latter case, of selecting for the office a medical practitioner free from the calls upon his time entailed by the performance of duties under the Poor-laws. The efforts of the Board appear to have been successful with sanitary authorities in this direction, and we may assume that the policy of the Board is now definitely settled in this matter.

The report refers to the loss sustained by the Board and the public service by the resignation (from failing health, soon followed by the death) of Dr. Seaton, and justly adds, "it is worthy of especial record that the organisation of the present successful system of public vaccination in this country is in great part due to his labours."

With regard to public vaccination, the report gives the completed returns of the vaccination officers for the year 1877. These, in the opinion of the Board, afford conclusive evidence of the efficiency with which, on the whole, the machinery established by the Vaccination Acts of 1867 and 1871 is working. Of 887,947 children, whose births were returned by the several vaccination officers of England and Wales as having been registered in 1877, more than 86 per cent. had at the time of closing the returns been registered as successfully vaccinated, nearly 9 per cent. as having died early and unvaccinated, and a minute fraction (·013 per cent.) as having contracted small-pox without being vaccinated. A further small proportion (about 0·1 per cent.) were certified as "insusceptible of vaccination" in consequence of the operation having been three times performed without success; and in these cases the parents would be exempted from any further liability to penalty under the Vaccination Acts, although the children would be as liable to take small-pox as if no attempt had been made to vaccinate them. The returns further record cases amounting

to 0·75 per cent. of the whole, in which vaccination was temporarily postponed on account of the children's state of health. The proportion of children not coming within the above categories amounts to about 3·8 per cent. of the whole, the large majority being cases which, on account of the removal of the parents after the registrations of the births, the vaccination officers were unable to trace. No doubt, it is observed, such cases are especially numerous in years when, as in 1877-78, trade is bad, and there is much movement of labourers from place to place, sometimes in search of work, sometimes in search of cheaper quarters.

"It thus appears," the report continues, "that of the entire number of children born, only about 4½ per cent. remain unaccounted for as regards vaccination in the returns. This proportion is larger by a small fraction than that of the children similarly unaccounted for in 1876, but is smaller than in previous returns, the percentage in the six years 1872-77 being 5·1, 4·8, 4·8, 4·7, 4.3, and 4·5 respectively. Making allowance for a not inconsiderable number of cases in which children have been vaccinated, although vaccination has not been certified, or the certificate has not been registered, and for those in which vaccination, postponed at the times when the returns were made up, has been subsequently performed, we may safely assume that the proportion of children born during these six years and now living without protection against small-pox is considerably less than 4 per cent."

The district in which the largest proportion of children escape vaccination is the metropolis. This is attributed chiefly to the migratory habits of certain classes of the population. The number of children who escape yearly from vaccination in London, or of whom there is no proof of vaccination, is stated to be about 9000, and so far as they really are unvaccinated they constitute a serious danger and widen the field of small-pox.

The awards given to public vaccinators in recognition of excellence of work done and careful observance of the instructions and regulations on the subject amounted to £16,906 17*s.* 4*d.* The applications to the National Vaccine Establishment for supplies of vaccine lymph during the year were 9410, and to meet them 36,633 charges of lymph were issued. The question of "animal vaccination" was under the consideration of the Board, but since the period to which this report refers the Board has determined upon certain measures with regard to this subject which render further allusion to it here unnecessary. Numerous inquiries were undertaken by the medical department of the Board with reference to outbreaks of disease and other sanitary matters, more particulars as to which will be here deferred until the special report of that department appears.

The number of annual reports sent by medical officers of health to the Board, in accordance with their instructions, during the year amounted to no less than 1403. The reports, it appears, present great diversity, but on the whole, the Board says, they exhibit progress from year to year, in correctly appreciating the questions with which the medical officer of health has to deal.

An inquiry has been instituted (or rather return called for) by the Board relating to the sanitary condition of the various districts, which have been the subject of special inspection by their medical inspectors since 1871. The report of the inquiry (or return) will be presented to Parliament, and will be looked for with much interest.

The Board has received several petitions from local authorities in favour of a general compulsory enactment that all householders, or all medical practitioners, should notify to the sanitary authority the outbreak of infectious disease. The Board, however, holds that further experience is required of the working of such schemes on the subject as exist under local Acts, before venturing to introduce a general measure. The Board, however, thinks it may be necessary to strengthen the hands of sanitary authorities with reference to the closing of schools on account of local epidemics of infectious disease.

Numerous other subjects touching sanitary administration enter into the report, for which, however, we must refer to the report itself.

ON the 11th inst. a bust of Lord Provost Boyd was presented to the Royal Infirmary of Edinburgh by Sir Robert Christison. An inscription on the pedestal of the bust states that the erection of the new Royal Infirmary was due to the exertions of Lord Provost Boyd.

THE SERVICES.

THE AFGHAN WAR—KANDAHAR.

WE have received a letter from a correspondent with the Kandahar Army giving us some particulars of the force in occupation since the disaster of the 27th July. He describes the time as having been a most anxious one, not so much on account of scarcity of provisions or water as the intense heat of the weather, added to the confined space occupied by the garrison with the numbers of native followers, horses, and transport animals. In food the chief want was vegetables, of which there were none to be had, except some preserved cases fortunately stored by the Commissariat before the siege began. There was a fair supply of lime-juice, and this was issued to the troops daily as long as it lasted. Scurvy did not actually appear during the time the garrison was shut up, but a good number of cases were developing a scorbutic taint. The sickness up to the time of relief by General Roberts was not heavy, but the Bengal Division brought in no less than 860 sick; of these only 240 were Europeans, the rest native troops and followers. The cases were chiefly malarial and sun fevers, diarrhœa, and general debility, induced by the long marches, privations, and exposure. Surgeon-Major Preston, who was wounded in the arm and through the loins at the action of Maiwand when in medical charge of the 66th Regiment, left for India with a convoy of sick on the 7th September, and was doing well. At the sortie of the 16th August the medical officers and subordinates were most assiduous and zealous in their efforts to dress and bring in the wounded. Surgeon-Majors Giraud, Keith, Arnott, and Kelsall were with the attacking party. One hospital assistant and five doolie bearers were killed while carrying in wounded men; ten doolie bearers wounded. Great praise is given to those native bearers for their pluck and steadiness; they were often under hot fire, but showed no sign of disobeying orders, even at imminent risk of their lives. It was decided by Dr. Hanbury, the Principal Medical Officer of General Roberts's force, that a section of the Field Hospital should accompany each brigade into action on the morning of Sept. 1st, when the General determined to attack Ayoob Khan. Stretcher parties in charge of medical officers and subordinates were formed to convey the wounded from the field to the dressing stations and on to the Field Hospitals. As on the 16th, they did their work admirably, calling forth loud encomiums from the General and his staff. The total killed and wounded in this action was 237; the latter were comfortably housed in European privates' tents—six beds to a tent, instead of the regulated number of eighteen. The native sick were also amply provided for and attended to. On the march from Cabul to Kandahar only two Europeans died—one from dysentery, the other committed suicide. Of the Sepoys only seven died, and of the native followers twenty-one succumbed during the journey—a total that must be considered remarkably small when the arduous and trying nature of the march is remembered. That the medical officers did their duty with a will is proved by the fact that not one was ever absent from duty a single hour from Cabul to Kandahar—a fact of which their Surgeon-General is justly proud.

THE MEDICAL OFFICERS' MESS, ALDERSHOT.

General Sir Daniel Lysons and staff dined with the officers of the Army Medical Department on Wednesday, the 13th, in their new mess-room in the South Camp. By the kind permission of the officers of the 7th Dragoon Guards, the band of the regiment attended during dinner.

MEDICAL OFFICERS SERVING WITH THE KURAM FORCE.

To the Editor of THE LANCET.

SIR,—In your number of the 14th August, you give lists of the medical officers employed in Afghanistan. But your correspondent has only given the names of the Army Medical Department; leaving out all those of the Indian Medical Service, which in this force form half the medical staff and in the other divisions a much larger proportion, I believe.

I enclose a correct list of the Kuram Force Staff (Medical). The Khyber line Divisions are now broken up.

Yours faithfully,

A. F. DALE,
Deputy Surgeon-General, P. M. O., Kuram Force.

Kuram, Sept. 22, 1880.

Deputy Surgeon-General A. J. Dale—Principal Medical Officer.

Army Medical Department.

Surgs-Major	T. Wright,		European Base Hospital.
,,	W. O'Halloran	in medical charge	E-3 R.A. Kohat.
,,	R. Jackson	,,	2-8 Regt.
,,	J. J. O'Reilly	,,	Depôt Hospital, Thall.
,,	T. W. Patterson	,,	1-8 R.A.
,,	W. M. Harman	,,	85th K. L. I.
Surgeons	W. Donovan,		doing duty with Base Hospital.
,,	R. H. Quill,	in medical charge	C-4 R.A.
,,	J. C. Dorman	,,	Depôt Hospital, Kuram.
,,	J. Boulger,		doing duty Depôt Hospital, Thall.
,,	P. H. Johnstone		doing duty with Base Hospital.
,,	P. G. Jeners	,,	Depot Hospital, Kohat.

Indian Medical Department.

Surgs-Major	G. Griffith,	in medical charge	18 Bengal Cavalry.
,,	H. Compique,		Deoli Irregular Force.
urgeons	W. N. Keefer	in medical charge	Native Base Hospital.
,,	J. E. C. Ferris,		1st Bengal Cavalry.
,,	W. E. Griffiths,	in medical charge	20th Punjab Infantry.
,,	J. Crofts,	in officiating medical charge	21st P.N.I.
,,	S. F. Bigger	,,	13th N.I.
,,	G. M. Nixon	,,	5th N.I.I.
,,	G. W. P. Dennys	,,	13th B. Lancers.
,,	S. C. Sarkies	,,	29th P.N.I.

Deputy Surgeon H. Kendall, who was promoted to the rank of Surgeon-General in last Saturday's *Gazette*, remains at Chatham as Principal Medical Officer of that district until he is retired on full pay, in January next.

ARMY MEDICAL DEPARTMENT.—Deputy Surgeon-General Henry Kendall, M.D., to be Surgeon-General, vice H. G. Gordon, M.D., granted retired pay; Brigade Surgeon John Ogilvy, M.D., to be Deputy Surgeon-General, vice H. Kendall, M.D.; Surgeon-Major William Skeen, M.D., to be Brigade-Surgeon, vice J. Ogilvy, M.D.; Surgeon-Major Emil Becher, M.D., is granted retired pay, with the honorary rank of Brigade Surgeon; Surgeon-Major Thomas Allen Thornhill, M.B., is granted retired pay, with the honorary rank of Brigade-Surgeon; Surgeon-Major Francis Patrick Staples has retired upon temporary half-pay; Surgeon-Major Alexander Johnston, M.D., from half-pay, to be Surgeon-Major. The undermentioned Surgeons to be Surgeons-Major:—Alexander Haldane Stokes, M.B.; George Roderick Triphook, M.B.; James Scanlan, M.B.; George Corry; Francis Arthur Davy, M.D.; Alexander William Duke, M.D.; Robert Mark Bradford; Henry Stannard; Richard Dawson Bennett; Thomas Faris, M.B.; and Hugh Brady White.

VOLUNTEERS.—1st Norfolk (Artillery) Corps: William Mallam Vores, M.B., to be Acting Surgeon; dated Oct. 20th, 1880. 1st Buckinghamshire (Rifle) Corps: Cadwallader Brooke Wolseley, M.D., to be Acting Surgeon; dated Oct. 20th, 1880. 1st Worcestershire Corps: Honorary Assistant Surgeon Cecil Webster resigns his commission; dated Oct. 20th, 1880. 10th Lancashire Corps: John Murray, M.B., to be Acting Surgeon; dated Oct. 20th, 1880.

ADMIRALTY.—In accordance with the provisions of Her Majesty's Orders in Council of Feb. 22nd, 1870, and Feb. 4th, 1875, Staff-Surgeon Alexander Crosbie, M.D., has been placed on the Retired List of his rank from the 8th inst.

Royal Naval Artillery Volunteers (London Brigade).—Arthur Price, M.R.C.S., to be Surgeon.

Surgeon J. A. Langdon has been appointed to the *Firefly*.

THE MASON SCIENCE COLLEGE has made a good beginning forty-four students having already entered.

Correspondence.

"Audi alteram partem."

ON THE IMMEDIATE TREATMENT OF STRICTURE OF THE URETHRA.

To the Editor of THE LANCET.

SIR,—In my letter to you of Oct. 2nd, I omitted to refer to Mr. Holt's second note, in which he stated that there was a false passage in one of the fatal cases at King's College Hospital. As I mentioned that Mr. Henry Smith had had a death, and as it was to his case that Mr. Holt's remark applied, I think it only just to Mr. Smith to state that the false passage existed months before he even saw the patient, and had apparently nothing to do with the fatal result. If Mr. Holt had honoured the meeting at Cambridge with his presence, and stated, as he has done in his note, that he had been fortunate enough not to have had a fatal case in private, I should have asked him for information as to certain cases about which it is possible I might have been misinformed. Much good will come out of the discussion which has taken place in your columns. It was not known at the meeting that Mr. Christopher Heath had had five deaths, for, although that gentleman had published successful cases of the operation, *in extenso*, in THE LANCET, he had not enlightened the profession with the details of his fatal ones. My remark as to how few of the deaths had been published was based on a list I had with me at the meeting of upwards of thirty cases terminating fatally, which had occurred to different surgeons in this country, of which I had been accidentally informed by various members of our profession. In reply to Mr. Harrison, I would say that I am not aware that any advocate of internal urethrotomy has ever asserted of it, as Mr. Holt has done of rupture, that it was "free from every danger immediate or remote." I have yet to learn that such an affirmation can be made of any operation on the urinary organs: "A scratch in the urethra may cause death" (Gouley). As Mr. Macnamara has omitted to specify what were the "unsupported" charges to which he refers, I am unable to notice his letter. The advocates of internal urethrotomy are to be congratulated on Dr. Lyster's accession to their ranks. His example is just another illustration of what is to be seen all over the world of surgeons abandoning rupture and taking to cutting. If anyone can show me an operation which is attended by less risk, and followed by better results than internal urethrotomy, I will at once say "I am already converted; my heart is with him."

I remain, Sir, your obedient servant,

Portman-square, Oct. 18th, 1880. W. F. TEEVAN.

CHIAN TURPENTINE IN CANCER.

To the Editor of THE LANCET.

SIR,—I am sorry to see in to-day's LANCET that Prof. Clay accuses me of having "made an attack upon him." I had no such intention. If, however, to make a painstaking, scrupulous, and detailed trial of Chian turpentine in the treatment of uterine and other cancer, and to publish my results, is to attack him, then I am guilty. If to declare my intention still further to prove or disprove its efficacy is attacking him, I am guilty. If to invite Mr. Clay to watch a case with one of my colleagues or myself, and to treat that case as he shall choose, or to allow us to see one of his cases, if this be attacking him, I am guilty. If to utter no single word in criticism of Mr. Clay's theories or facts is to attack him, then, and then only, I am guilty.

Indeed, Sir, Prof. Clay's severest critic has been Prof. Clay himself, whose own words (quoted in my letter of the 9th) tell of pain relieved, hæmorrhage checked, infiltration lessened, and cancers "literally melting away" in a time varying from four days to at most a few weeks. Sure nothing quicker was ever achieved by magic or spell in the Middle Ages—

> "Eye of newt, or toe of frog,
> Wool of bat, and tongue of dog,"

never worked more mightily. And yet in the same breath

Mr. Clay complains that others with whom the drug has proved uniformly worthless have not tried it long enough, or have used the wrong turpentine, or, worse still, as in the instance of Mr. Lawson Tait and myself, he replies only by an unworthy innuendo.

In conclusion, let me say that since I began this letter I was asked to see a patient in consultation with a gentleman (name and address enclosed) who has been under Mr. Clay's care (which case, curiously enough, turns out to be one of those referred to by Mr. Lawson Tait), and is still taking his pills. She informs me that the pain grows worse, and on examination her doctor tells me that the progress of the cancer has not been affected by the Chian turpentine since he examined her when Mr. Clay first saw her. In short, the case is in a condition of active growth.

Sincerely hoping that a cancer cure may be discovered which will be useful in other hands than those of the publisher,

I remain, Sir, yours, &c.,

J. HICKINBOTHAM.

Broad-street, Birmingham, Oct. 16th, 1880.

To the Editor of THE LANCET.

SIR,—Mr. Clay's letter avoids all the points raised in those of Dr. Hickinbotham and myself, and his retiring under the shelter of an insinuation will do little to establish his assertions.

The claim of the cancer-curer has been put forward so often and so vainly that any repetition of it must at once be met with incredulity. Mr. Clay's method of publication is not such as to overcome that, and there is nothing to be heard in Birmingham to diminish it. Mr. Clay's communications appeared in the local daily papers, and since that we have heard of cases of all kinds of cancer flocking to him, and of his retailing to them his mixture and his pills. But not a word has reached us about a cure, save that one case of Dr. Drury's, which so unfortunately died with symptoms, as described to me, uncommonly like those of an ordinary death from cancer. Of this case, still more unfortunately, no post-mortem is recorded.

Surely, if this drug has the effect claimed by Mr. Clay, his colleagues must know something of his astonishing cures. But I cannot learn that they do. The details, scant though they are, which Mr. Clay gives of his cases, are quite sufficient to show that he has not attached sufficient importance to two very common incidents in the history of uterine cancer, and this omission fully explains all that he has written on the subject. Let him submit his cases to his colleagues, or other competent observers, that the actual existence of cancer may be beyond dispute; let him cure a single case, and he will have no reason to complain of the congratulations he will receive from the profession in Birmingham, as elsewhere. On the contrary, let him maintain his present attitude, and no language will be too strong for his condemnation.

I am, Sir, your obedient servant,

Birmingham, Oct. 18th, 1880. LAWSON TAIT.

To the Editor of THE LANCET.

SIR,—In THE LANCET of July 10th last you kindly inserted a letter from me respecting a case of scirrhous cancer of the uterus, which had apparently derived great benefit from the Chian turpentine as recommended by Professor Clay. Will you allow me to state that since that letter appeared the patient has gradually become worse: secondary symptoms, such as phlebitis and blocking-up of the femoral veins, constipation, alternating with severe and almost uncontrollable diarrhœa, vomiting and inability to retain food on the stomach, &c. &c., soon setting in. And now the cancerous cachexia and emaciation, repeated floodings, and offensive discharge, indicate too plainly that the end is not far distant.

That the turpentine appeared for a time to check the advance of the disease, and also to cause a decided diminution in the size of the tumour, I cannot deny; and as my patient persevered so steadily in taking the pills obtained from the firm of chemists in London whence Professor Clay kindly advised me to obtain them for her, I regret very much having now to give such an unsatisfactory account of her.

Will the gentlemen who wrote to me respecting the further result of the treatment in this case kindly "accept this intimation."

I remain, Sir, yours obediently,

J. E. KENYON, L.R.C.P. Lond., M.R.C.S. Eng.

Park-road, Bradford, Yorks, Oct. 12th, 1880.

HASTY NOTES BY A RAMBLER.

THE PENNSYLVANIA HOSPITAL AT PHILADELPHIA.

THIS hospital, which now holds two hundred beds, was established about 1751, and with its foundation Dr. Franklin was intimately connected. It gives one the impression externally of an old-fashioned English house, massively, yet commodiously put together. Within are found the most modern and approved arrangements. Perhaps exception might be taken to the resident officers' rooms, one medium-sized room being scarcely sufficient accommodation as the common sitting-room and bedroom of two officers. At the same time, even in this room there is something that will hardly be seen in any hospital in our metropolis—viz., telephonic communication with each member of the staff, and the city central office. While waiting for the doctor, who very kindly acted as showman, it was not a little astonishing to hear verbal inquiries from the police-court concerning the progress of a poor fellow who had that morning been stabbed.

The wards are of good size, not at all overcrowded, with painted walls. The floors are either polished or painted. The absence of fireplaces, and the excellence of the ventilation, are perhaps the most remarkable features in the hospital. It appears that since 1876 they have had in use forced ventilation by fans and flues, arranged both for heated and cold air. In the basement is a revolving fan, eight feet in diameter, and thirty inches wide, driven by steam. This fan, which is calculated to supply 30,000 cubic feet of air per minute, is placed at the orifice of a large fresh air-duct, which leads to the chamber containing the steam-coils for heating (these coils may be in action or not, according to the season of the year) and thence by large smooth flues to all parts of the building. Along the middle of the wards, on either side, are iron supports from floor to ceiling, which communicate at their bases with these smooth air-flues. For about eighteen inches up from the floor the supports are perforated, and through the perforations hot or cold air is continually pouring into the ward. The supports are perforated at the top as well as at the bottom, and through their upper ends they communicate with ventilating flues which carry the foul air away through the roof. I was assured that the wards are always fresh; that there is no difficulty in regulating the temperature; that draught is never complained of; and, what is more important than all, that during the last four years traumatic erysipelas and septicæmia, which were prevalent before, have been almost unknown.

In reply to inquiries concerning the nursing arrangements, I received some exceedingly strong testimony in favour of male attendants in male wards, and was informed that in Philadelphia, except at one or two Catholic institutions, male attendants were invariably employed.

The jerking and jarring of the patient consequent on moving the hospital iron bedstead, whose castors are notoriously faulty, is got over by means of a small carriage with india-rubber wheels of ample size, which is rolled under the bed. By a simple arrangement of screws and levers, the carriage lifts the bedstead off its legs, and permits of its being moved in any direction without discomfort to the patient.

Until the year 1873, accidents, whether drunken or otherwise, were admitted to the wards at all hours of the night—a deplorable arrangement indeed. In consequence of the injustice that was thus done to patients in the hospital, "recent accident wards" were constructed not far from the entrance. These wards contain six male and four female beds. Here all in-patient cases are first placed, and those arriving during the night are kept until next day. And that the accidents proper should not be disturbed by those brought on by drink, there are separate

wards with one bed each, apart from the rest, for the benefit of inebriates.

There is a good pathological museum attached to the hospital, which is carefully looked after by a "microscopist," who is reckoned among the staff of resident officers. In freezing specimens for section-cutting they use rhigolene, one of the first products that come over in the preparation of rock oil. Its specific gravity is ·625, and it boils at less than 80° F. They prefer it to ether, on account of its quicker action. For inhalation ether is the anæsthetic most commonly employed. Of late they have used bromide of ethyl, but with what success I failed to gather.

The total absence of clinical clerks and dressers could hardly fail to be remarked, the house-surgeon's assistant taking the form of a four-wheel go-cart fitted with every requisite. Clinical study in the medical curriculum is apparently unnecessary. I was assured that at Jefferson College, which is one of the leading medical schools in this country, a man might take his degree in medicine and go forth to practise his profession *without having ever seen a case!*

IRELAND.

(From our own Correspondent.)

THE contest for the Presidency of the College of Physicians, which was expected with considerable interest, did not take place last Monday, Dr. Hayden having at the last moment withdrawn his candidature, and permitted Dr. Johnstone, ex-Master of the Rotundo Lying-in Hospital, to be elected President unopposed.

The annual conferring of degrees by the Queen's University took place last week at Dublin Castle, the Duke of Leinster, Chancellor of the University, presiding. His Grace referred to the increasing prosperity of the University, and the steady advancement during the academic year just closed; the number of students on the rolls having advanced from 920 to 958. The Prize Essay on the Poetry of Wordsworth, to which was added the Peel Prize, was very favourably reported to the Senate, and was written by Mr. Walter W. Fisher, an undergraduate in medicine of the Queen's Colleges at Belfast and Galway.

At a meeting of subscribers to the Cork Fever Hospital held last week, the report of the Committee of Management, in reference to certain irregularities which were alluded to at the recent inquiry, was adopted. The report found that Dr. Adderley substituted whisky for brandy in the treatment of the boy Crawford from economical motives, but that the medical staff were not aware there was no brandy in the hospital for a considerable time; also that he neglected to carry out the medical directions as to packing, and shaving, and blistering the head of the patient; although the directions about the first procedure might not have been sufficiently definite; and that in administering claret after milk instead of the brandy, as directed, he was to blame. The committee further reported that Dr. Jones's prescription book was removed from the hospital, and they have directed that in future every facility shall be given to the medical officers to take extracts. The physicians for the future are to hold consultations, and the committee have determined that they shall not prescribe any medicine that is not named in the Pharmacopœia, approved of by the medical staff, and sanctioned by the committee. These constitute the principal matters referred to in the report, but as showing that the hospital has done good service I may state that since its foundation in 1822, it has received 113,463 patients, of whom 6185 died, being a mortality of close on 5½ per cent. When these figures are compared with the returns of the Cork-street Fever Hospital in Dublin, it is found that from 1804 up to the 1st of last March, 204,080 patients were under treatment, of which number 15,032 died, representing a death-rate of about 7½ per cent. A meeting will be held on the 4th prox. to elect a successor to Dr. Adderley, when it is probable that the report of the committee suggesting certain alterations in the bye-laws will be formally adopted.

You recently alluded to the inquiry conducted by Dr. MacCabe, in reference to certain irregularities which had arisen in the management of the Kilmainham Small-pox Hospital; and last week the Local Government Board forwarded Dr. MacCabe's report to the Guardians of the South Dublin Union. The charges brought forward by a former patient of the hospital were considered to be substantiated; but these irregularities mainly occurred during the time Keeley was employed as a pauper wardsman; and the inspector directs the Board's attention to the fact, that the witnesses who had been patients in the hospital bore testimony to the care and kindness with which they had been treated, and to the abundance and excellence of the dietary. The Local Government Board are of opinion that it is never advisable to trust to pauper inmates the administration of stimulants to patients who are so ill as to be unable to claim their rights, or to complain to the superior officers that the stimulants have been withheld; and believe that the remedy lies in the appointment of a responsible paid nurse for night duty. They also make suggestions for the custody of patients' clothing, and recommend that a distinctive dress, or uniform, should be adopted for the inmates.

John I. Donovan, M.D., of Ballincollig, has been appointed to the Commission of the Peace for the County of Cork.

Dublin, 19th October, 1880.

Obituary.

J. PEARSON IRVINE, M.D., F.R.C.P.

DR. PEARSON IRVINE was the son of a medical practitioner at Galgate, Lancaster. After taking the degree of Bachelor of Arts in the University of London, he commenced the study of medicine at the Liverpool Medical School, and after working there for two years he entered at University College, London, in 1863. His quiet and yet genial manner, hard work, and conspicuous ability, soon gained him the regard and esteem of his fellow students. His ability and diligence earned for him distinguished honours at the University of London, where, in 1864, he obtained at the First M.B. examination the exhibition in Anatomy, the medal in Physiology, and honours in Chemistry and Materia Medica, and also at the Second B.Sc. examination the University Scholarship in Geology, and honours in Chemistry and Biology. In the following year his studies were rudely interrupted by the death of his father, and, for family reasons, he had to leave London, and, having qualified, to take his father's practice. He worked in it for several years, and only resumed his duties in London in 1869. He took the M.B. degree in the following year (being awarded the gold medal in Medicine), and the Doctor's degree in 1871.

He intended at one time to settle in Liverpool, where he was well known and esteemed, and he actually practised there for a time. Circumstances, however, led to a change in his plans, and, after marrying, he came to London in 1874, and was soon afterwards appointed assistant physician to Charing-cross Hospital. He lectured there on Auscultation and on Forensic Medicine, and was Demonstrator of Morbid Anatomy.

Dr. Irvine's published writings were not very numerous, for he was one of those who worked much and published comparatively little. All that he wrote, however, was characterised by careful observation and thoughtful comment, and many of the facts which he recorded, although they excited little attention at the time, will probably be often referred to in the future. The subjects on which he chiefly wrote related to diseases of the vascular system and acute specific diseases. At the Pathological Society he was a frequent exhibitor, and some of the most remarkable cases of aneurism brought before the Society of late years were shown by him. The condition of the heart and great vessels in chlorosis long engaged his attention, and the subject was discussed by him in an elaborate paper, read three years ago before the Medical and Chirurgical Society—a paper which contained many important observations, but, to the general surprise, did not find a place in the Society's "Transactions." His most valuable work, however, related to the acute specific diseases. A series of illustrations of the occasional obscurity of the diagnosis of these affections, published three years ago, contains many important practical facts; but his most important contribution to medical literature was the series of articles on Relapse in Typhoid Fever, contributed a year ago to a contemporary. His last work was to expand these into a short treatise on the subject, which is, we believe, just ready for publication, but will be,

alas! posthumous. The practical character of his writings, directed, no doubt, by the knowledge which he gained in earlier life by personal experience of the needs of the practitioner, gives to his work a special value, and would probably have soon secured to him a substantial reward in professional success.

As a teacher Dr. Irvine was most successful. He had a firm grasp of facts, a logical precision of thought, and a clearness and readiness of expression, which are the necessary qualifications for effective teaching. As a colleague, his considerate and kind nature, invariable courteousness, his willingness to oblige, and wisdom of counsel, endeared him to his associates, who now mourn his loss. He was always the same. The writer recalls him as a fellow-student, junior and senior, as a practitioner in Liverpool, and as a friend of later years—frank and sincere, honest hearted, and true to others, willing to serve even at the cost of self-sacrifice, modest and retiring, yet never shrinking at the call of duty. The promise of a successful and brilliant career was just opening before him when his last illness came. Overwork, the altar on which have been sacrificed so many bright young lives in our profession, was the ultimate cause of his death. His devotion to his profession is attested not only by what he published, but by the piles of manuscript that he has left. He thought less of himself than of his work, which he loved "not wisely, but too well."

THE LATE LORD JUSTICE THESIGER.

THE following facts in connexion with the fatal illness of Lord Justice Thesiger, whose death took place on Wednesday last, will be read with interest:—

Lord Justice Thesiger had scarlet fever when two years old, followed by inflammation of the left ear. He was deaf of the affected ear more or less, and suffered from occasional attacks of pain with discharge ever since. Three or four years ago he consulted Mr. Dalby. Finding perforation of the tympanic membrane he advised artificial protection, which gave him the greatest relief and comfort.

Towards the end of his last autumnal holiday, while bathing in a rather rough sea, he was knocked on the left ear by a wave, the organ being at the time, there is reason to believe, unprotected. Fresh mischief soon followed in the affected ear, accompanied by considerable pain in the head. Pyæmic symptoms supervened about a fortnight ago. There was no evidence of meningitis, or cerebral abscess or inflammation extending to the mastoid cells. There was, however, *tenderness along the carotid of the corresponding side*, and considerable stiffness of the neck, which pointed to the inflammation having extended along the internal jugular vein. No collection of matter could be detected anywhere. During the last week he lost all pain in the head. Congestion in base of one lung came on three days before he died, which spread very rapidly. His breathing becoming much embarrassed, he rapidly sank, his mind being perfectly clear almost to the last.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT a quarterly meeting of the Council of the Royal College of Surgeons, held on Thursday last, Mr. Savory was re-elected to the Court of Examiners, Mr. J. Hutchinson was elected member of the Court, and Mr. Timothy Holmes examiner in Dental Surgery, in succession to Mr. F. Le Gros Clark.

A communication was received from the General Medical Council to the effect that, after the year 1881, Mechanics would be added to the list of compulsory subjects in the preliminary examination. Sir James Paget gave notice of motion that, after 1881, the College give up to some general educational or examining body the charge of its preliminary examination. Mr. Holden gave notice of motion that the President's annual report to the Fellows of the College be discontinued. Mr. A. E. J. Barker, F.R.C.S. Ireland, was elected *ad eundem* Fellow of the College.

Medical News.

UNIVERSITY OF DURHAM. — At the first examination for the degree of Bachelor in Medicine, which terminated on the 8th inst., the following candidates satisfied the Examiners:—

Ainsley, Thomas George, M.R.C.S.
Barley, David Henry.
Clowes, Herbert Alfred, M.R.C.S.
Dodd, Anthony.
Dowding, A. W. Woodman, L.R.C.P., M.R.C.S.
Easton, Frederick.
East, Frederick William Allen.
Fenwick, Henry Marshall.
Kempster, William Henry.
Rudd, Walter Edgar.

Seven candidates failed to satisfy the Examiners, and were referred to their studies for six months; and one candidate withdrew.

APOTHECARIES' HALL. —The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Oct. 14th:—

Catfield, Arthur, Burnt-Ash-lane, Lee.
Graham, Robert, Upper Kennington-lane.
Sisley, Richard, Park-row, Albert-gate.
Steer, William, Courtenay-terrace, Salcombe.
Williams, Augustus Fredk., Ravensthorpe, Northants.

The following gentleman also on the same day passed his Primary Professional Examination:—

Goddard, Walter Horace, St. Mary's Hospital.

COLLEGE OF PHYSICIANS IN IRELAND. — The following have been elected to the Fellowship of this College:—

Hatchell, Joseph Henry.
Sibthorpe, Charles, (Professor of Pathology, Madras Medical College.)

At a meeting of the Fellows held on St. Luke's Day the following office-bearers were elected for the ensuing year:—President: George Johnston. Vice-president: Walter George Smith. Censors: John Hawtrey Benson, Reuben J. Harvey, Arthur V. Macan, Walter George Smith. Treasurer: Aquilla Smith. Registrar: J. Magee Finny. Examiners in Midwifery: Fleetwood Churchill, J. R. Kirkpatrick. Additional Examiner in Medicine and Chemistry: George F. Duffey. Additional Examiner in Materia Medica: J. Wm. Moore. Additional Examiner in Anatomy: W. G. Smith. Professor of Medical Jurisprudence: Robert Travers.

HARVEIAN SOCIETY OF LONDON. — The Harveian Lectures will be given by Dr. James E. Pollock, on Dec. 2nd, 9th, and 16th, "On the Prognosis and Treatment of Chronic Diseases of the Chest in relation to Modern Pathology."

MR. F. SUTTON, Public Vaccinator, Willingham District, Gainsborough Union, has been awarded the sum of £8 15s. for efficient vaccination in his district. Third time in succession.

THE LATE MR. THOMAS E. SCOBELL.—The friends of this gentleman have placed a handsome brass tablet in Plympton St. Mary Church, and presented an altar frontal in memoriam.

THE LONDON HOSPITAL MEDICAL COLLEGE.—Mr. Frank Hichens has obtained the Entrance Science Scholarship, of the value of £50, and Mr. E. Bryceson that of the value of £30; and Mr. S. Ashley has obtained the Buxton Scholarship of the value of £30, and Mr. H. Guinness that of the value of £20.

ST. GEORGE'S HOSPITAL MEDICAL SCHOOL.—Mr. Arthur Shield has obtained both the William Brown Exhibitions of £100 per annum, tenable for two years, and £40 per annum, tenable for three years, and Mr. Bradshaw and Mr. Taylor have obtained the Brackenbury prizes in medicine and surgery, value about £50 each.

UNIVERSITY OF ABERDEEN. —At a meeting of members of the University Council of Aberdeen, held on Monday in the Temple, with reference to the approaching election of Assessor (Professor Hunter in the chair), the following resolutions were unanimously agreed to:—Moved by D. Ferrier, M.A., M.D., F.R.S., Professor of Forensic Medicine, King's College, London, and seconded by the Rev. Peter Forsyth, M.A.,—"That in order to adapt the curriculum of Arts to the wants of the professions room

should be found for such subjects as Chemistry, Botany, History (Modern and Ancient), Political Economy, Modern Languages, and a more extended course of English Composition and Literature; and as it is impossible to enlarge the present curriculum, candidates for degrees in Arts should be allowed to select some of the above-mentioned subjects in lieu of Higher Mathematics, Greek, or other existing compulsory subjects." Moved by Stephen Mackenzie, M.D., F.R.C.P., and seconded by the Rev. John Gibb,—"That as Dr. Bain accepts the principle of option for the Arts degree, this meeting strongly urges the members of Council to vote for Dr. Bain as Assessor."

CAMBRIDGE UNIVERSITY.—At a Congregation held on Oct. 14th the following gentlemen were appointed Examiners:—First M.B. Examination: Dr. Anningson, Caius; Professor Dewar. Second M.B. Examination: Dr. Watney, St. John's; C. Creighton, King's. Third M.B. Examination: Dr. Reginald Thompson, Trinity; Dr. Galabin, Trinity. Medical and Surgical Degrees: Mr. Luther Holden, F.R.C.S., President of the Royal College of Surgeons; Mr. Thomas Bryant, F.R.C.S. Dr. Cheadle, of Gonville and Caius College, was appointed Assessor to the Regius Professor of Physic.

PERTHSHIRE MEDICAL ASSOCIATION.—The annual meeting of this Association was held in the Directors' Room at the Infirmary a few days ago, when the following were elected office-bearers for the year, viz.:—Dr. Robertson (Stanley), President; Dr. Fleming, Vice-President; Dr. Graham, Treasurer; Dr. Baird, Secretary; and Drs. Bramwell, Nairne, M'Naughton, Laing (Bridge of Earn), and Gillespie (Methven), Members of Council. The President made a few introductory remarks; after which, a paper was read by Dr. M'Callum, which elicited considerable discussion. The Society now numbers about fifty members.

SOUTH DURHAM AND CLEVELAND MEDICAL SOCIETY.—The seventh annual meeting of this flourishing society was held at the Stockton Hospital on the 12th inst., when the following were elected officers for the session 1880-81. President: R. W. Foss, M.D., Stockton-on-Tees. Vice-Presidents: G. Middlemiss, Darlington; W. J. Williams, M.D., Middlesbro'. Committee: J. R. Fothergill, M.D., Darlington; J. Farquharson, Stockton; J. R. Pearson, M.D., South Stockton; C. Young, M.D., Yarm; J. Rawlings, Hartlepool; J. W. Eastwood, M.D., Dinsdale-park; J. B. Peacock, Darlington; J. A. Malcomson, M.D., Middlesbro'; Robert Smith, M.D., Sedgefield. Hon. Secretary: J. R. Morison, M.B., Hartlepool.

THE GERMAN PHARMACOPŒIA.—The Imperial Government of Germany has appointed a commission, which has already commenced its sittings at Berlin, for the revision of the German Pharmacopœia. The commission consists of twenty-seven members, of whom sixteen are professors from various Universities, five are apothecaries, and the remaining six are eminent practising physicians or surgeons. The Prussian War Office has deputed two military doctors and a military apothecary to attend the sittings. Dr. Schmidt, professor of pharmacy at the University of Halle, will act as secretary to the commission, which is presided over by Privy Councillor Dr. Struck, director of the Imperial Sanitary Department.

NORTH-EASTERN HOSPITAL FOR CHILDREN.—On the evening of the 9th instant a conversazione was held at the North-Eastern Hospital for Children, Hackney-road, and more than two hundred guests assembled at the invitation of the President, committee, and medical staff of the institution. The hospital, which was founded thirteen years ago, is placed in one of the poorest and most densely populated districts of the metropolis, precautions being taken that none but fit subjects for treatment shall be admitted to the benefits of the charity. The originator of the institution is stated to have been a lady, a member of the Society of Friends, who took a single room in the district as a dispensary. Subsequently two houses were secured, and in June last new wards were formally opened by her Royal Highness the Duchess of Connaught, and permission was given to name one the "Connaught Ward." The number of beds in the extended hospital is sixty, and in the Convalescent Home at Croydon eight beds were provided. Since the opening 146,000 patients have been relieved, and the average number of out-patients weekly is nearly 1000. The new wards display the most recent improvements for securing comfort, cleanliness, and ventilation. Communication by telephone is provided all over the building, and there is a complete isolation-ward, which is connected only by telephone with the rest of the building. There has been a most ingenious adaptation of the great flat roof, which has been securely railed in and turned to the purpose of a playground, whence the little sufferers may obtain occasional glimpses of the outlying country. The cost of the construction of the new wards and offices, together with that of the freehold, is about £21,000; and one result of opening the wards is that there is an expenditure in excess of income estimated at £700 a year. There is a debt remaining on the building of about £600, and the expenditure for the past three years has been £400 in excess of income. New subscriptions are therefore much needed.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—The usual quarterly court of this Society was held on Wednesday last, Oct. 13th, at 5 P.M., in the Library of the Royal Medico-Chirurgical Society. The President, Sir George Burrows, was in the chair. Applications for relief were read from sixty widows and seventeen orphans; it was resolved that a sum of £1219 10s. be recommended to be granted at the next meeting of the directors. The acting treasurer reporting favourably of the state of the finances of the Society, the court had the satisfaction of voting a Christmas present of £5 to each widow and £2 to each orphan on the list of recipients, and £4 to each orphan on the Copeland Fund. One member was elected. No deaths were reported among the members or recipient of grants, and only one orphan was declared ineligible from age to receive any further assistance.

BEQUESTS AND DONATIONS TO MEDICAL CHARITIES.—Mr. T. Veasey, of Baldock, bequeathed £50 to the Hitchin Infirmary and £300 more after the death of his wife. Mr. Henry Ludlam, late of Piccadilly, bequeathed £1000 to the St. George's and St. James's Dispensary. Mr. J. Surman Surman, late of Swindon Hall, Cheltenham, bequeathed £2000 to the Gloucester Infirmary, and £1000 each to the Cheltenham General Hospital and the Dispensary. By the will of the late Mrs. Susan Gorely, of Dover, the following legacies have been left: to the Margate Sea-bathing Infirmary £5000; to the Dover Hospital £1000; to the Hospital for Diseases of the Throat £500; to the Kent County Ophthalmic Hospital £1000; to King's College Hospital £5000; to the Kent and Canterbury Hospital £2000.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning, at the latest.*

ALFORD, H. J., M.D., M.R.C.S.E., has been appointed Public Analyst for the County of Somerset.

BARTON, T. B., M.D., L.R.C.S.I., L.M., has been appointed House-Surgeon to the West Kent General Hospital, vice Harris, resigned.

BISS, C. Y., M.B., M.R.C.P.L., has been appointed Honorary Physician to the Western General Dispensary, Marylebone-road.

BODKIN, P. J. T., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer for the No. 1 Dispensary District of the Tuam Union.

BRYDE, J. C., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer of Health for the Rural Sanitary District of the Runcorn Union. £120 per annum.

CURRIE, A. S., M.D., M.R.C.S.E., has been appointed Medical Officer for the Lydney District of the Chepstow Union, vice Tuckwell, resigned.

DANIELL, G. W., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer for the Blandford Urban Sanitary District. £10 per annum.

DAY, E. J., M.R.C.S.E., L.S.A.L., has been appointed Public Analyst for the Borough of Bridport.

DENHAM, J. K., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Demonstrator of Anatomy at the School of Surgery, Royal College of Surgeons, Ireland.

EVANS, A. L., L.R.C.P.L., M.R.C.S.E., has been appointed Medical Officer for the Fourth District of the Lymington Union.

FIELD, A., M.B., C.M., has been appointed Medical Superintendent of the Lunatic Asylum, and Visiting Physician of the Lazaretto, Barbadoes.

GORDON, J. J., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Assistant Medical Officer and Dispenser at the Workhouse and Infirmary, Islington.

GRAHAM, W., M.D., has been appointed Medical Officer of Health for the Urban Sanitary District of Middleton and Tonge.

LANGDON, J. W., M.R.C.S.E., L.S.A.L., has been appointed House-Surgeon to the Royal Westminster Ophthalmic Hospital, vice Murray, resigned.

LINEKER, Mr. E. H., has been appointed Medical Officer for the Stamfordham District of the Castle Ward Union.

MCNEILL, J. P., M.D., has been appointed Public Analyst for the Borough of Tiverton.

MILLICAN, K. W., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer for the Kineton District of the Stratford-on-Avon Union.

MUTER, Mr. J., has been reappointed Public Analyst for Bermondsey. Remuneration by fees.

NAPIER, Mr. J., has been appointed Public Analyst for the Borough of Southwold. Remuneration by fees.

O'CONNOR, Mr. T. B., has been appointed Medical Officer to the Army and Navy Club, vice Miller, resigned.

PARDINGTON, G. L., L.R.C.P.L., M.R.C.S.E., L.S.A.L., has been appointed House-Physician to the General Lying-in Hospital, York-road, Lambeth, vice H. C. Wright, resigned.

PEARCE, A., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Eleventh District of the Kingsbridge Union.

REID, J., M.D., M.B., C.M., has been appointed Public Vaccinator for No. 3 District of the Fulham Union.

SCOTT, J. W., M.R.C.S.E., L.R.C.P., L.S.A.L., has been appointed Medical Officer for No. 3 District of the Wolverhampton Union.

SMITH, C. C., M.B., M.R.C.S.E., has been appointed Medical Officer of Health for the Redditch Urban Sanitary District, vice Page, whose appointment has expired.

THOMPSON, C. S., M.B., C.M., has been appointed Medical Officer to the Bideford District of the Bideford Union.

THORNLEY, J., L.R.C.P.Ed., L.F.P.S.G., has been appointed Medical Officer for the Sharples District of the Bolton Union.

TURNER, J. E., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer to the Tuam Union Workhouse.

WHITE, R. P., M.B., C.M., has been appointed Assistant House-Surgeon to the Halifax Infirmary, vice Hammond, who has been appointed House-Surgeon.

WHITELEY, G. W., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer for the Rickmansworth South District of the Watford Union.

WILSON, J. S., M.R.C.S.E., L.R.C.P.Ed., F.R.G.S., &c., has been appointed Medical Officer to St. Ann's Dispensary, St. Ann's-road, Stamford-hill.

Births, Marriages, and Deaths.

BIRTHS.

CUTHBERT.—On the 16th inst., the wife of W. W. Cuthbert, M.D., of Debenham, Suffolk, and eldest daughter of S. Grimwade, of Upper Tulse-hill, of a son.

DUKES.—On the 20th inst., at Sunnyside, Rugby, the wife of Clement Dukes, M.D., of a son.

GILL.—On the 15th inst., at Bootham, York, the wife of H. Clifford Gill, Medical Superintendent of the York Lunatic Hospital, of a son.

HUME.—On the 8th inst., at 87, Westgate-road, Newcastle-on-Tyne, the wife of G. H. Hume, M.D., of a son.

HUTCHISON.—On the 10th inst., at Chipping Norton, Oxon., the wife of G. Wright Hutchison, M.D., M.R.C.P.Ed., of a daughter.

MACNALTY.—On the 20th inst., at Glenridding Lake, Ullswater, Westmoreland, the wife of Frank C. MacNalty, A.B., M.B. Dub. Univ., of a son (Arthur Salusbury).

STERICKER.—On the 16th inst., at Tollington-park, N., the wife of William Stericker, M.B., of a daughter.

MARRIAGES.

FRASER—TRENCHARD.—On the 14th inst., at St. Augustine's Church, Honor Oak, by the Rev. Dr. Morgan, Donald Alexander Fraser, M.R.C.S.E., L.S.A.L., eldest son of P. Gordon Fraser, Esq., late Colonial Treasurer and Member of the Executive and Legislative Councils of Tasmania, to Elizabeth, eldest daughter of E. P. Trenchard, Esq., of Woodville, Honor Oak.

MILWARD—LOCKHART.—On the 14th inst., at Christ Church, Edinburgh, William Clement Milward, M.B., Surgeon, Army Medical Department, to Elizabeth, eldest daughter of Miles Lockhart, Esq.

O'DWYER—RINGWOOD.—On the 19th inst., at Rochester, by the Rev. G. Eden Peake, Thomas Francis O'Dwyer, M.D., Surgeon-Major, Army Medical Department, to Henrietta Matilda, third daughter of the late Rev. John Ringwood, of Crom, co. Fermanagh.

PITMAN—EVANS.—On the 12th inst., at St. Leonard's Church, Seaford, by the Rev. W. H. M. Buck, William, son of the late Dr. Robert Pitman, of Highgate-hill, to Nellie, second daughter of Edwin Evans, Esq., of Twyn House, Seaford, Sussex. No cards.

STEPHEN—ANDERSON.—On the 14th inst., at St. Mary's, Putney, James Stephen, M.D., of Peterhead, to Agnes, daughter of the late G. G. Anderson, Solicitor, of Peterhead.

STIVEN—THOMSON.—On the 9th inst., at All Hallows', Allerton, Liverpool, Edward W. Flemyng Stiven, M.D., of Sunderland, to Annie, daughter of Walter Thomson, Esq.

DEATHS.

BROWNE.—On the 11th inst., at Renaragh, co. Donegal, William Browne, M.D., aged 64.

HOPGOOD.—On the 8th inst., Thomas Hopgood, M.R.C.S.E., L.A.C., of Chipping Norton, Oxon., aged 67.

HOGG.—On the 18th inst., at Connaught-square, Hyde-park, John Hogg, M.D., formerly of Gower-street, London, and of Truro, Cornwall, at the close of his 77th year.

IRVINE.—On the 15th inst., at Mansfield-street, Portland-place, James Pearson Irvine, M.D., aged 38.

N.B.—*A fee of 2s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

INTERNATIONAL MEDICAL CONGRESS, 1881.

STATE MEDICINE SECTION.—Officers Elect: President, John Simon, Esq., C.B., D.C.L., F.R.S. Vice-Presidents: Dr. George Buchanan; Surg.-Major Professor de Chaumont, F.R.S.; Deputy-Surgeon-General Norman Chevers, M.D.; Dr. Douglas Maclagan, F.R.S.E.; J. Netten Radcliffe, Esq. Secretaries: Professor Corfield, M.D.; Dr. Thorne Thorne.

SUBJECTS FOR PAPERS AND DISCUSSION.—On the first day, Measures by which to prevent the Diffusion of different Communicable Diseases from country to country, or within the limits of any single country, will be discussed—e.g., 1. Yellow Fever, Cholera, Plague. 2. Enteric Fever Scarlet Fever, Measles, Whooping-cough, Diphtheria. 3. Syphilis. 4. Glanders, Hydrophobia, Anthrax. On the second day, the Influence of various articles of Food (not including Water) in spreading Parasitic, Zymotic, Tubercular, and other Diseases, will be debated. On the third day the subjects will be: (1) Conditions to be imposed on the legally-qualified Practitioners of one country who may seek authority to practise in another country. (2) Precautions to be taken in Medical Nomenclature and Classification to guard against False Statistical Conclusions.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, October 21st, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Oct. 15	30·31	N.W.	42	41	..	54	33	..	Overcast
,, 16	30·01	N.E.	52	50	..	56	39	..	Foggy
,, 17	30·07	N.E.	54	50	..	57	48	..	Foggy
,, 18	30·08	W N W	50	42	75	59	46	..	Foggy
,, 19	30·05	N.E.	49	44	..	50	43	..	Cloudy
,, 20	29·68	E N E	35	35	..	41	32	0·50	Snowing
,, 21	29·81	N.	37	36	..	49	30	0·26	Overcast

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

LONDON FOGS.

DR. ALFRED CARPENTER'S paper, read before the Social Science Congress in Edinburgh, "On the Causes of Fogs in Large Towns," and his subsequent raising of the question of London fogs in particular in a letter published in the columns of *The Times*, come very fitly after Dr. Mitchell had directed attention to the influence of the persistent fog of the autumn and winter of 1879-80 upon the mortality of the metropolis. Dr. Carpenter attributes our metropolitan fogs to unconsumed carbon in the air, and suggests, in view of prevention, the adoption of gas as much as possible for cooking and other purposes in order to reduce smoke, and a tax on fire-grates not constructed to consume their own smoke, together with a rigid enforcement of the law as to smoky chimneys.

A. W. S.—Our correspondent should combine with other practitioners in the neighbourhood to represent to the Registrar the invalidity of the certificates signed by an L.M.

Ambulance.—Dr. Weatherly's Ambulance Lectures are published by Griffith and Farran, St. Paul's-churchyard.

CERTIFICATION OF INSANE PAUPERS.

To the Editor of THE LANCET.

SIR,—A board of guardians contract to pay their medical officers £5 per annum each for certifying to all the so-called pauper lunatics in each district, such arrangement being a rider to the general contracts. It often happens that those certified to as paupers are maintained directly or indirectly by friends after admission to asylum. Does that make them private patients, and therefore improperly admitted and detained? The Lunacy Law, I believe, states the fee to be 10s. 6d. to 21s. per case, and I have a strong impression it is not legal for guardians to contract for this service. Would you or your correspondents kindly inform me on the matter, as some thirty or forty cases per annum are certified to by each surgeon for the above amount, which, in my opinion, is totally inadequate for the services rendered.

I am, Sir, yours &c.,

Oct. 19th, 1880. SUBSCRIBER.

CURIOSITIES OF ADULTERATION.

IN a recent report presented to the Corporation of Salford by the borough analyst, Mr. J. Carter Bell, several curious illustrations are given of forms of adulteration apparently in ordinary use. The report referred to 154 samples, consisting of 52 milks, 49 breads, 17 teas, 5 coffees, 3 peppers, 4 sugars, 11 wines, 1 baker's mixture, and 5 waters. Of these, 24 were adulterated, consisting of 9 milks, 9 wines, 5 breads, and 1 butter. The five breads contained a chemical compound which is known by the name of baker's mixture. This is now being sold in Salford to bakers for the purpose of mixing with inferior flour. It is made from phosphates of alumina, lime, and magnesia, with sulphuric acid and hydrochloric acid, and Mr. Carter Bell found that it has the effect of spoiling the bread, and making it injurious to health. It also contained a considerable amount of arsenic, the consequence of its being made from impure materials. Mr. Carter Bell also examined nine samples of so-called unfermented wines and two of ordinary tent wines. Of these nine samples, three bearing labels stating that the bottle contained "pure grape juice," "virgin fruit of the vine," &c., consisted of sugar, tartaric acid, salicylic acid, and colouring matter, with a considerable quantity of copper, the result, doubtless, of ignorant or careless manufacture. Grape juice was, in Mr. Carter Bell's opinion, entirely absent. Another sample, labelled "Pure and genuine unfermented fruit of the vine," was evidently a composite article artificially made, and so carelessly prepared as to contain alcohol. One sample of unfermented wine imported from abroad contained some grape juice; but the presence of alcohol and an abundance of yeast cells showed that fermentation had not been arrested. One example was labelled "The selected wine of the Temperance Fraternity." This was an ordinary low class fermented wine, containing a large amount of alcohol. Of the nine samples of the so-called unfermented wines, only one was genuine and was what it professed to be, "Pure grape juice entirely free from alcohol." The samples of tent were sweet and highly alcoholic wines, one sample containing as much as 40 per cent. of proof spirit. This wine had evidently been strongly brandied, no natural wine containing anything like this proportion of alcohol. The number and variety of these so-called unfermented wines testify to a large demand for articles of this class; but the examinations pointed to the necessity of a very careful discretion in their selection. Three samples of water taken from the lodge of a manufactory were so highly contaminated with sewage matter as to make them dangerous to health.

Weak Sight.—There are no advantages, optical or ophthalmic.

MEDICAL ASSISTANTS AND THEIR RELIGIOUS PERSUASION.

To the Editor of THE LANCET.

SIR,—Kindly permit me to make a few remarks under this heading on behalf of medical assistants, with the hope that they will be broadly considered by the respectable and unprejudiced members of the profession.

I am a medical assistant, and lately had occasion to advertise in THE LANCET for a re-engagement. To my advertisement I got several replies from medical men both in town and country practice, the majority of whom desired to know my religion. My answer was, "I am a Roman Catholic," at the same time mentioning I had lived with several Protestant gentlemen, and that my religion never caused the least inconvenience to them, or interfered with me in any way whatever in the discharge of my duties. To my astonishment, I received replies expressing regret that my religion was Roman Catholic. One was couched in the following words:—"The majority of my patients are Protestants, and I fear it (your religion) would be disagreeable for me as well as for them. Only for that I should be glad to accept you as my assistant." The other replies I received were of a similar character.

Now, Sir, surely it is time this bigotry and fanaticism, which still seem to infect the minds of some members of the profession, ought to give place to a more healthy condition. We can well understand how the evil prevails among ministers of religion; but its existence in medical men appears to me to be a mockery and a farce. How few members of this class we find attending church or chapel themselves; certainly their duties do not always prevent them, and yet they make the strictest inquiries about the poor hard-worked assistant's religion, as if it were a part of his duties to administer the word of God "to his household." I consider that the religion of a candidate ought never to debar him so long as his other qualities in every respect were found to be satisfactory. I am certain, however, that the competent and respectable man who may sometimes be placed in this position meets with sympathy from the generous and high-minded, of whom, thank God, our profession can boast a vast majority.

I fear, Sir, I have trespassed too much on your valuable space; but the subject, I hope, will answer as an apology from,

Yours &c.,

October, 1880. SAUVE QUI PEUT.

Migrator.—A letter addressed "Medicus, Bazaar Agency, 170, North-street, Leeds," will reach the gentleman referred to.

C. F. H.—The hood is, we believe, of crimson silk, lined with white satin, worn over an ordinary master's gown.

Mr. J. MacCormac, (Lindley.)—The woodcut has not yet come to hand.

MEDICAL LEGISLATION IN COLORADO.

COLORADO would appear, owing to efficient legislation in Central States, to be overrun with quacks and pretenders to medical science. At the last meeting of the Legislature, the State Society accordingly appointed a Committee to present specified matters which require legal adjustment, and a Bill for the regulation of the practice of medicine was the outcome. This measure is the object of unsparing ridicule by the *Rocky Mountain Medical Review*, which characterises the Bill as "a squib, a parody, or, as Orpheus C. would say, a 'sarkasm.'" Our contemporary gives the leading features of the scheme as follows:—Five physicians are to be appointed by the Governor as an examining board; they are to prepare one thousand questions and publish the same. Each and every physician is to present himself for examination, and must answer six questions upon each branch of medical knowledge; these questions being chosen by lottery from among the thousand. There is to be a paraphernalia of tin boxes, locks, keys, envelopes, and seals, and provision is made that no candidate during examination shall be allowed to absent himself for any purpose without being attended by two members of the examining board, and even then for not more than fifteen minutes. Finally, after the board has examined all the candidates, they in turn are to be examined by a committee selected by the late examiners! For this work the gentlemen appointed, presumably practitioners of standing, are to receive the handsome remuneration of three dollars per day, they being employed, it is calculated, about "thirty days in each year."

Surgeon-Major, 7th Bengal Cavalry.—The case is one for local help.

THE CRISIS AT GUY'S HOSPITAL.

To the Editor of THE LANCET.

SIR,—The very humiliating position in which the representatives of the medical staff of Guy's Hospital have placed themselves and their colleagues by withdrawing themselves from their self-asserted position—let that position be tenable or not—is at once a sad loss of dignity to themselves and humbling to the whole profession. Removed from the dignity, either assumed or real, of a factor in the conduct and management of one of the greatest of our national charities, which, in common with all the hospitals of this country, is dependent for the very essence of its utility on the unremunerated services of members of the hospital profession; for without these services where would these charities be?

A sense of satisfaction ran through the profession, that at last one of its chief representative bodies had asserted its claims to a voice in the management of one of the oldest and most renowned of our medical charities; and had the whole staff of Guy's resigned, rather than yield, surely no respectable member of the profession would have accepted office in their place, and the profession would have stood by them and supported their action. As it is, I feel, and others will equally so, I am confident, that the Guy's staff have sacrificed their credit and the fair fame of the profession. Never has such an opportunity occurred for the profession to assert itself in a spirit at once honourable and benevolent, and never has such an opportunity been so injudiciously lost.

Had the staff of Guy's persisted, the profession would have been at one with them, and said of them, with Addison, "It is not in mortals to command success; we have done more, Sempronius—we have deserved it." Whereas now it must feel, in the language of a higher authority "A city divided against itself cannot stand." Such is the position of the staff of Guy's Hospital.

I am, Sir, yours obediently,

October, 1880. A GENERAL PRACTITIONER.

Dr. K. M., (Pest.)—Dr. Seaton's Handbook, published by Macmillan, Bedford-street, Strand.

R. H.—Wilson's Handbook of Hygiene (Churchill).

A. J. M.—Not right, but law.

THE USE OF IMPURE MATERIALS IN ERECTING BUILDINGS.

To the Editor of THE LANCET.

SIR,—I notice in your issue of October 9th some remarks by a correspondent on the necessity of using pure water in preparing mortar for the erection of new buildings. But how much more probable is it that another material of which mortar is largely composed contains a much larger proportion of impurity, and is more likely to produce the bad effects which I, too, have often found to arise in newly-built and plastered buildings. Road-sand, which is so much used in making mortar, is the sifted sweepings of the streets and roads of and near towns, and contains a large quantity of droppings of all sorts; and though this is often stored in large heaps till wanted, and partly exposed to the oxidising influence of the air, yet it is merely the outside of the heap which is thus purified, and the inside retains and afterwards gives out as gas abominations which are so antagonistic to health. Corporations and other bodies have the power of preventing the construction of erections which are not in accordance with the requirements of their bye-laws. How much more serviceable would be the will and the exercise of it in forbidding the use of material which contains such unhealthy germs, and which really does produce not unfrequently such unhealthy results.

Yours faithfully,

J. H. GRAMSHAW, M.D., &c.,

October, 1880. Medical Officer of Health for Gravesend.

M.D. Edin.—For the French B.A. a candidate must be at least sixteen years old, and upon registering his name for examination he must produce the following papers:—1. His certificate of birth. 2. A formal application to be admitted to examination, written in his own hand, and countersigned by his father or guardian if he be a minor. The same formalities are required for the B.Sc. The programmes of these examinations can be obtained from the publishers, who are Delalain, 56, Rue des Ecoles, for the Baccalauréat ès-lettres, and Hachette, 79, Boulevard St. Germain, for the Baccalauréat ès-Sciences. As regards the curriculum of the Faculty of Medicine, "M.D." should consult the forthcoming Students' Number of the *Progrès Médical*, or the *Guide de l'Etudiant*, published by Dolahaye; or a book by Dr. Hardwicke, entitled "Medical Education and Practice in all parts of the World" (Churchill, 1880).

Kentigern.—Friday, November 5th.

COLOUR-BLINDNESS AND RAILWAY EMPLOYÉS.

To the Editor of THE LANCET.

SIR,—I cannot but think that Mr. Biggs's letter on the above subject in your last issue is calculated, if it produce any effect at all, to do much harm by inducing a false security.

Your correspondent seems to imagine that because certain railway companies have enjoined that candidates for employment in their service shall be tested as to their colour perception, it may be assumed that this is efficiently done; yet he admits that he himself for some time used a test which he subsequently found to be utterly untrustworthy. It is true that since that discovery he has adopted another method, which is certainly original, but which, as it seems to me, is much more open to fraud and other sources of fallacy than the test which it superseded. The contemplation of such a treasure as a library, containing scores of books bound in all the colours of the rainbow, must have added much to your correspondent's serenity, or he would never have been "satisfied" by the candidate picking out a few books of conspicuous hues. Putting aside altogether the question of fraud on the part of the candidate, to which the test is obviously remarkably open, he stands a fair chance of honestly passing, even if he is colour-blind. He has to pick out four books; the blue and yellow hardly ever cause any difficulty; the red and green remain, and it is just these colours which confuse the colour-blind, but the latter does not confound all shades of red with all shades of green. Given a red and a green of equal intensity, the one or the other will seem to him the darker according as he is *red-* or *green-blind*. They will appear to him as shades of one colour, and, if off his guard, he may call them both by one name; but he knows by experience that the one shade is what other people call red and the other green. He probably looks upon the distinction as an unnecessary refinement, but considers it prudent to humour the crotchets of the examiner, and names the colours accordingly correctly; yet such a man would be totally unfit to act as a signalman or driver, as he could only distinguish red from green when the two colours were seen together, and would even then confound some shades of the one colour with some of the other.

The essentials of a good test are that it shall be quite independent of the *names* of colours; that it shall be simple and rapid, applicable to large numbers at a time, and secure against fraud. The only test which has hitherto been found to fulfil all these conditions is Holgrem's. This test depends on the comparison of different colours, Berlin wools being the material employed. It is not the more pronounced colours which are most useful in detecting colour-blindness (though these serve to determine its nature), but the pale greens, drabs, and greys which the colour-blind always confound.

Your correspondent implies his belief that the prevalence of colour-blindness in this country has been exaggerated. Our data are not yet sufficient to enable us to determine whether this is so or not; but out of the 920 medical men present at the meeting of the British Medical Association at Cambridge in August last, 745 were tested as to their colour-perception. Of these, 19 were found to be defective in this respect; so that even if we suppose, which is, of course, most improbable, that all those who were not tested had normal colour-perception, we have amongst an educated body of men more than two per cent. whose sense of colour is defective.

That more facts are needed everyone will admit, and it is to those who hold appointments like your correspondent's that we must look for such facts. If those who hold such posts would test all employés using the same tests and record their results, much valuable information would be obtained.

A medical man in Wales is carrying out Holgrem's test on a large scale, and I shall be happy to give anyone having similar opportunities the details of the tests which he is employing, which are identical with those used at Cambridge. It will be a relief to such to learn that the possession of a chromatic library is not a *sine qua non*.

I remain, Sir, yours truly,

Wimpole-street, Oct. 18th, 1880. W. ADAMS FROST, F.R.C.S.

A Tutor.—We cannot afford space for the publication of the long list of names of those who passed the Arts examination for the Fellowship and Membership of the Royal College of Surgeons at Burlington House in September last. We are informed that 166 passed for the Fellowship, and 258 for the Membership, making a total of 368. The rejections were for the Fellowship 8, and the Membership 114. The examinations take place half-yearly.

TREATMENT OF CHOLERAIC DIARRHŒA BY THE HYPODERMIC INJECTION OF MORPHIA.

To the Editor of THE LANCET.

SIR,—Mr. Hardman will, doubtless, be glad to hear that the treatment of the above disorder which he so strongly advocates (THE LANCET, Oct. 2nd) has in my hands proved equally successful and gratifying.

A case of very severe diarrhœa which occurred in my practice some three years ago, in which I used the injection, impressed me very much by reason of the rapid change from a condition of great gravity to one of comparative ease and safety. Everything swallowed was immediately rejected; the dejections escaped without control into the bed; the eyes were deeply sunken and dull; the voice little more than a whisper; and cramps and capillary congestion of the surface general. I think it was the utter impossibility of anything being retained by the stomach in this case which suggested the subcutaneous method to me. I injected one-third of a grain of morphia, and within half an hour all the symptoms, but especially the cramps and purging, were relieved.

I have used this method of treatment in indicated cases ever since, and not unfrequently have heard the patient say he was "never purged after the injection."

I may add that lately in a case of subacute gastritis from alcoholic excess, the vomiting was quickly checked by the injection of one-sixth of a grain of the alkaloid, the usual remedies being of no avail. The same good effect was noticed in three separate attacks.

I am, Sir, yours faithfully,

Darlington, October, 1880. L. EASTWOOD.

To the Editor of THE LANCET.

SIR,—I reside in a manufacturing district, and am in the habit of recommending several of my patients in the summer to go to Blackpool, believing it to be a health-resort, where pure air can be breathed, and wasted energies revived. I am, therefore, very much astonished to read in your journal of Oct. 2nd the article on Diarrhœa by Mr. Hardman, of that town. He gives the history of *only* thirteen severe cases, as he says, *taken at random from a considerable number of which he has the notes*; and as, according to the dates given, almost all these cases occurred in one week, I should certainly like to know what is the cause of so much diarrhœa in Blackpool. There are nine medical men there, and if each one gets his average of such cases, there must have been in August last some hundreds of cases of this complaint in the town; and in the interests of myself and other medical men, who advise their patients to go to Blackpool, I must ask Mr. Hardman to explain how it is that such a serious *insanitary* condition is allowed to prevail! for until this is removed I shall certainly refrain from sending patients to Blackpool for their health.

Summer diarrhœa generally affects young children; but all these cases are in adults, which renders the matter much more serious.

Yours &c.,

Oct. 6th, 1880. M.D.

INFANTILE DIARRHŒA AT WIDNES.

To the Editor of THE LANCET.

SIR,—In THE LANCET of the 2nd inst. you quote some remarks said to have been made by the chairman of the Widnes Local Board, and you very properly add that "this statement convicted the Local Board of the grossest negligence with reference to the removal and deposit of refuse."

As I am responsible for the statement which was made, will you permit me to say, for our credit's sake, that I also expressly stated that as soon as our inspector observed that the condemned fruit was taken by the children he at once took measures to have all such material destroyed, or placed out of reach; and this very obvious precaution has been, to the best of my knowledge, uniformly observed.

Yours truly,

EUSTACE CAREY,
Chairman of Health Committee of the
October, 1880. Widnes Local Board.

USE OF ALCOHOL IN PNEUMONIA.

SURGEON JOHN HOYSTEAD, Station Hospital, Hyderabad, writes as follows on this subject:—

"When quartered at Fort Dakka (four stations up the Kyber line route to Cabul) it was my privilege to treat successfully numerous cases of pneumonia occurring in the 39th Punjab Native Infantry, all of a low type, with liquid rusty sputa and rapid hepatisation. Before my arrival at Dakka, one and occasionally two men were dying daily from that disease.... The morning of my arrival at the Fort one man died of pneumonia, and I took charge of eight desperate cases. I remained at Dakka two months, and lost but one case, a very old soldier, with worn-out constitution and double pneumonia. The secret of success in the treatment of these cases was the immediate exhibition of alcohol, rum or brandy, in large quantity, from six to eight ounces in twenty-four hours, the ordinary stimulating plan of treatment with carbonate of ammonia, &c. &c., and constant counter-irritation to chest-walls, no doubt also assisted nature. Generally quinine, in ten-grain doses night and morning, was employed to hit the malarial complication. My object in placing such patients upon a liquor ration from the first was, if possible, to prevent the disease running into its secondary and tertiary characteristics, which it usually did with terrible rapidity when unassisted by art."

Dr. Williams—The Calendar of the College of Surgeons contains the names of 1215 Fellows, 558 of whom obtained the distinction by after examination. The Members of the College number nearly 16,000.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir J. Paget, London; Professor Bentley, London; Dr. Humphry, Cambridge; Professor Buchanan, Glasgow; Surgeon-Major Ringer, Laugharne; Sir Joseph Fayrer, London; Mr. L. Tait, Birmingham; Mr. Biggs; Mr. A. Clarke, London; Mr. Shirley Murphy; Dr. S. Mackenzie, London; Mr. MacCormac, Lindley; Mr. Pattinson; Dr. More, Rothwell; Dr. J. Campbell, Dublin; Mr. Gibb, London; Dr. Wadham, London; Mr. Barnes, Carlisle; Mr. M. Scott, London; Mr. Hardman, London; Dr. Gillespie; Mr. Frost, London; Dr. Armstrong, Newcastle-on-Tyne; Dr. Skerritt, Clifton; Mr. Slater, Halifax; Dr. Saundby; Mr. Gaddes; Mr. H. Wyman-Jeffreys; Dr. Murray; Mr. Forster; Dr. Henry, Rochdale; Mr. Nixon, London; Mr. E. B. Aveling, London; Messrs. Mullard Brothers, London; Mr. North, York; Dr. J. Hickinbotham, Birmingham; Mr. M'Ewen, Alnwick; Mr. A. W. Wallis, Brentwood; Mr. Richardson, Rusholme; Mr. Blackett, London; Mr. N. Sweeting, London; Mr. Stradling, Lisbon; Mr. Wahab, London; Mr. F. Clarke, London; Dr. Macnaughton Jones; Dr. Irving, Largs; Mr. J. Horsfall, Leeds; Mr. Jones, Ruthin; Dr. Duncan, Croydon; Mr. Christy, London; Deputy Surgeon-General Dale; Mr. A. C. Ayr; Mr. N. C. Collier; Surgeon-Major M'Gann; Dr. Holneman, New York; Miss Haslam; Mr. Eustace Carey; Mr. Clarke, Bodmin; Dr. Budd, North Tawton; Mr. Hopgood, Stoworth Wold; Mr. Vigurs, Newlyn East; Dr. Strahan, Beverley; Dr. Harding, Whitlesea; Dr. T. Taylor, London; Dr. Eberle, Easingwold; Dr. Norman Moore, London; Messrs. Eade and Caulfield, London; Messrs. A. and C. Black, Edinburgh; Mr. Low, Newcross; Mr. Hoggett, Norwood; Messrs. Young and Postan; Mr. Hunt, Hull; Mr. Pring, Dudley; Messrs. Smith and Son, Dublin; Dr. Gill, Canterbury; Messrs. H. and A. Layman, London; Mr. Blount, London; Mr. Saunder, Manchester; Mr. Roberts, Festiniog; Dr. Gill, Bootham; Mr. Johnston, Warwick; Messrs. Krohne and Sesseman; Mr. Corsellis; E. W., L.R.C.P. Ed.; A. J. M.; A General Practitioner; Kentigern; A Looker-on; R. M.; W. J. L.; D. M. R.; Locum Tenens; A. S. G.; Dr. K. M., Perth; A Medical Officer of Health; H. W. G.; Magnus; L. L. S., Frome; T. V. P., Newtown; Locus; B. F. W.; South Hants; P. D.; Medicus, Warwick; Disgusted; Ambulance; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Bell, Burton-on-Trent; Mr. Worsley, Ryde; Mr. Willoughby, Daventry; Messrs. Cow and Co., Streatham; Mr. Freedman, Bristol; Mr. Walker, Dover; Dr. Andrew, Shrewsbury; Mr. Oliver, Notting-hill; Mrs. Alban, London; Mrs. Pratt, Liverpool; Mr. Young, Chilton Polden; Mr. Sloane, Bradford; Mr. Richardson, Bryngwyn; Mr. Moorhouse, Ellesmere; Dr. Harding, Whitlesea; Rev. E. Collett, Retford; Messrs. Jacobs Brothers, Chelmsford; Mr. Rutter, Notting-hill; Mr. Elliott, Manchester; Mr. Field, London; Dr. Charteris, Arcachon; Mr. Fraser, Weston-super-Mare; Mr. Jackson, Sheffield; Mr. Lloyd, Sittingbourne; Mr. Jackson, Leeds; Dr. Macnalty, Ullswater; Dr. Walker, Aldbrough; Mr. Pollard, Brompton; Mr. Scholfield, Frome; Mr. Nuttall, Bradford; Mr. Bain, Huntingdon; M.R.C.S., London; M. N.; W. P.; Medicus, Winston; E. J.; Delta; Fides, Sheffield; C. D.; M., Clapham; M.D., Twickenham; R. Y. H.; R. B. M.; B. B., London; R. B. T.; L. M., Northampton; P. P., South Lambeth; Negotium; M.R.C.S., Walham Green; M.D., Cromer; H. W.; Alone; M.D., Chadwell Heath; J. E., Exeter; E. N.; Medicus, Hinderwell; L. R. H., Kentish-town; W., Putney; Medicus, Chesham; X., Edinburgh; Statim, London; D. P., Hackney; D. M. A.; J. S. B; J. H.

Chemists' Journal, Deutsche Medicinal-Zeitung, Pharmaceutical Journal, La Independencia Médica, L'Union Médicale, Science, Church of England Temperance Chronicle, Barbadoes Agricultural Reporter, Scarborough Mercury, Education, Revue d'Hygiène, Indian Daily News, Jersey Weekly Press, Western Daily Mercury, Le Naturaliste, Englishman, Leicester Chronicle, Redditch Indicator, Halifax Guardian, Canadian Journal of Medical Science, &c. &c., have been received.

Medical Diary for the ensuing Week.

Monday, Oct. 25.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.
MEDICAL SOCIETY OF LONDON.—8½ P.M. Mr. William Adams, "On Cases of Paralysis, with Contraction of one Leg following Pelvic Abscess in Women, and of both Legs following excessive loss of Blood after Miscarriage."

Tuesday, Oct. 26.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2 P.M.
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8½ P.M. Mr. Henry Morris, "On a Case of Aneurism of the External Carotid, in which, after failure of the Ligature of the Common Carotid, the old Operation was successful." — Mr. Savory, "On a Case of Abscess in the Neck, which in its course destroyed a large portion of the Carotid Artery, Jugular Vein, and Pneumogastric Nerve."

Wednesday, Oct. 27.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
HUNTERIAN SOCIETY.—8 P.M. Dr. Herman: "Notes on some Cases of Dysmenorrhœa."—Mr. Waren Tay will exhibit some Patients.

Thursday, Oct. 28.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.
OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.—8½ P.M. Consideration of Laws and Election of New Members. Mr. Hutchinson, "On a Case of Intraocular Hæmorrhage"; Dr. Hughlings Jackson, "On the Eye Symptoms in Locomotor Ataxy"; Mr. Higgens, "On Hyposcleral Cyclotomy." — 8 P.M. Living Specimens: Dr. Gowers, "Optic Neuritis from Intracranial Disease (two Cases)"; Mr. Nettleship, "Double Iritis with a Growth on one Iris"; Mr. J. E. Adams, "Peculiar Opacities in the Vitreous after Injury.

Friday, Oct. 29.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, Oct. 30.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

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The postal arrangements relating to the distribution of THE LANCET will be considered from time to time in the interests of subscribers.
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